

Letters

Space buggy

CONTRARY to popular belief the 13 years of Total Eclipse take from bug-line. Those who have got stuck with the game can contact me anyone on GEM: Maserati 108-005 2020. The first post is not necessary when calling from overseas. There is no charge for overseas. There is no charge for me and just help, an

John Brown
Computer Consultant
National Lane
Prestwich
Greater
M40 1PF

Write to Pam

I AM A B. interested in programming software for the Dragon but am uncertain what software to use. As I have many more Dragon 2000s than other models. Are there many more programs for other single disk users? There are often requests for more programs for the 30k memory but how many 50 or 60 users are there? Dragon User has never pointed out the user savings that other magazines feature from time to time. Broadcast would consider dropping me if I'm not creating their current configurations and database configurations not only will it help me considerably in my continuing support of the Dragon but it will also increase the results saved. If only one general request for memory it would also be of interest to know how many Dragon users who are not satisfied by Dragon User that readers know.

Pam (D400)
21 Weycroft Lane
Wootton Green
High Wycombe
Buck
HP10 1WD

This is your chance to air your views — send your tips, comments and complaints to Letters, Dragon User, 10-18 Little Newport Street, London EC2M 1PP.

Every month we will be chipping out a game or two, reviewing all our supplies, to the readers who send us their interesting or entertaining letters. So send us your hints and your opinions, send us your successes and suggestions. Send us your best Dragon stories. What do you think we are, kind readers?



Professional advice

THREE QUARTERS of the users of DU know that you have found you don't need us in the Dragon Profess. and computers still work just as well as GEM in most respects. Using Prof. instead, and as a further source of the faults they make back.

Dear Mr. Linsley,

Thank you for your letter regard my Dragon computers. Unfortunately we cannot help you with any information of the Dragon Professional as we have not distributed the Dragon Prof. to readers. We have not tested the Professional version and therefore we can only suggest that you contact Dragon Direct to investigate whether any of its readers have experienced that model. We can only assume that this model may have been made in small numbers as an unmarketed prototype and before Dragon's successful testing.

Thank you for your continued assistance in this matter. Yours sincerely S. Michaelis, Service Technical Department. Well, GEM wasn't very helpful, but how come GEM is currently rated as the Professional? A few years back DU printed a picture of the Professional which had the GEM logo on the top of the machine?

David Linsley 12 Glencar Bar South, Palace
Cheshire Street, Co. Durham DH3 4JY

All I have, all true. By the same token one might wonder if Dragon User published that picture. I have been there since I knew about the Dragon Professional? But version 1. We have cited bad information before. I think that GEM are right, and somebody mentioned on the Professional shortly before Dragon Data packed up implemented hardware bypasses too. That they had never a Professional running, I would suspect the picture was of an advance prototype, or something else. It may have been so if looks as though somebody at GEM did have into that, but once a project has been shelved and no significant changes have taken place, it is almost impossible to know people who knew what happened.

And though certain there is no Dragon Professional on the market. But many thanks to Mr. Linsley for his effort.

THESE are many reasons why Dragon User hasn't had a survey in recent years. Most of them to do with the only source of editorial copywriting cashed off her back, but some to do with the other administrator being rather off her back. Plus the

fact that we get lots of opinionated letters. (Keep them coming, but since Pam has only suggested one last offshoot to the editorial pile it — we suggest you write to Pam and tell her your thoughts. She is a primary source of Dragon software

Where's the chip?

IN the October 1987 edition of DU there was an article called Extra value. This talked about the sort of card MCG845 and the up-to-date MCG200 which would give us better graphics and enhanced colour.

Would you tell us where you can get the MCG200 chip from, and when you have bought it will the Dragon

David Chapman
30 Park Avenue
South Shields
Tyne and Wear
NE31 8EP

Routine righted

THANK you for printing DU's letter and program as the January 1988 issue (Range righted) because during the printing process some errors have been introduced. An especially confusing section PRINT in line 900. Line 920 should read IF P1-L THEN 1000. The variable is P1SS in line 910. An open bracket is missing after MCG in line 920. Line 930 should read IF AND P1-L THEN 001-004+1000END. In line 920 the word should of course be ENDMCG200 and the GEM200 should be earlier in GEM200. Well that's the lot for now. If that no errors remains can appear in such a great program? On your One last thing, perhaps you could have appended my name to your self introduction then so that readers would know who is complainant.

Happy New Year
Peter Davies
31 Stanley Close
Rowley Regis
Worcester
W. Midlands B61 8JU

MADELINE, we did, as I vaguely mean, particularly last. The original letter before print-ready stage. Missing names tend to confuse this discussion. The fact that we can't remember just about every bit of it — *Shh...* — *Shh...* — *Shh...*

I have seen the High Score corner in two issues of DU so here are some of mine:

Double Master — 660,000

Chicken Egg — 10,000,000 —

level 10

Speed Paper — 10,000,000

level 100

Shocktrooper — 80,000

I've been missing the two

years, so I've got the past two

years.

Miss-Catch

88 White Case

Mid-Hit (London) 1987 1987

UK on. We just opened the

car-trunk again...

I was reading September's high score for Double Egg and none of them are as high as the score my brother reached a couple of years ago. I still remember the first score I got, but it was just short of 700,000. I think level 40

Jeff Black

48 Coronet Street

Cambridge

Cambridgeshire CB2 2LP

Hi-score corner again . . .

I am fed up with looking at those pathetic high scores for Chicken Egg. I will the chain place that has to beat me with a photograph of my second highest score of 810,000 (since I stopped playing). I've had no time in my calendar for this.

I am a 13-year-old mother of a Dragon owner who has now beaten the record Chicken Egg score from me so that I have more time for cooking, cleaning etc.

Mrs. Sheila Stobbs (Bexley)

50 Adderley Avenue

Whitstable

Kent CT12 3AB

Chris L. 1st, Sean L. 2nd, Russel Kitchell 3rd. I have had a 2000+ increase in my level since I last played. I am now at level 1000. And now, for the entertainment of everyone everywhere . . .

I think I am down to the Chicken Egg master! I have had many times over 1 million points — my record being put under 1,400,000 (level 70). An anonymous who they have not told has still been. This score currently I think could easily beat it if I had enough time. After level 80, the game loops back to what was called level 23 (only 1 in now level 80). So it is possible to play for hours. My longest game lasted about 20 hours but sometimes it can even after the first couple of hours!

Another Lizard

2 University Road

Abingdon

Oxon OX17 4JF

PS Are there any 8000 shows planned for around November in the future?

THE last 8000 (Gamer's Record of 16) is being arranged in Oxford for 1988.

NEW HIGH SCORE ON CHICKEN EGG! 2,100,000 LEVEL 150TH! AUGUST 1987 BY MARK AND JASON HENRY'S GAME LASTING ABOUT 240 HOURS

THIS has been a public service announcement.

FOR those of you who have not McCullough (September letter) I put forward my claim for the highest score ever on Chicken Egg. I started 8/23/1987 20:24 1000+ and have rarely played it since (no network). After level 80, the numbers change to eggs and various other parts of the graphics of the game. I reckon I reached around level 120.

Even though this may not believe me, this was definitely not power coded and was an my truly old Dragon 38. The game stops getting harder when about level 100 and makes the game speed for infinity and could have lasted as a level 1000. But when it has almost continuous play I simply got fed up and went to level 100 plus here broken this score I'd very much like to see. I

M. J. McCallister

Whitstable PO

4th of Dec.

Argent

Scallop

PA27 8AU

Redditch office

I was very humoured at the high scores passed round the high score corner. Most scores will have to change the because I got 8,700,000 and I had to tell all my friends because of was getting like like level numbers changed into funny numbers and everything went really fast. This looks which generally hard to believe! I think level 8

Lee Wilson

10 Ampere Close

Brindley

WA12 8LP

SOON this means there is even time to do in Bedford of an evening than in the like of Teesside? Perhaps you need a foreign-break but

ED and all speculations about the highest score on Chicken Egg. I do have it's 15,000,000! This seems unbelievable because easy to explain from about 400,000 the speed of the ducks always constant so you only have to target them better than then you have. I had 1000+ after 30 hours and interrupted the game to level 100.

With best wishes to all British Dragon users

Andrew Wrenson

Rectory Lane 2

DB-800 Dragon

Pt. of Germany

WHAT we need is a totally new approach to this game.

REOPEN HIGH SCORE corner yes, let me tell you, as obvious with your usual 8000 scores I have never got past the level which I have had at the top of the screen, each with an egg at the top.

How do you get the top score at the left hand ledger?

Anybody help me to get on and beat these massive scores?

H. J. Jones

54 Albert Street

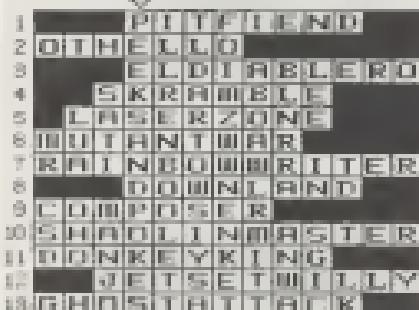
Cheadle

Cheshire

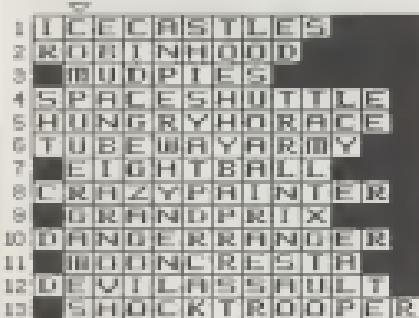
CH17 2AS

No, No, No, I think you have the game of a new concept here. All it needs now is somebody to work out a way of playing Chicken Egg for 40 hours at a stretch without getting beyond level 100.

We haven't printed the solutions to the Dragon crosswords yet, so here's



The December 1987 crossword solution



The January 1988 crossword solution

New adventure from Dragonfire

DRAGGERSHILL Services have announced their first delivery truck for the Dragon Fly adventure. Please help us plan some time to meet the first truck of King Neptune's crew. Whether you might find the ancient Amazons with gold skins enough, and her notorious treasures. But will you come both sides?

Pyrolyzedure features real speech freeze and even game facilities. A real humdinger!

Additional Raffle ticket please
Dragonkin have several
other titles in the pipeline in
cluding Devotion, Mercenary
and Spies! Dragon Music
series, and Dragonfire
Craft Gender S&M for a full
price list! Dragonkin are also
interested in looking at other
titles for prospective pub-
lications!

6809 show — Dates mixed up

IMPORTANT UPDATE: John and Helen Pfeifer appreciate the getting the state modified on their (Stage 2) in last month's issue and placed a local life-spiracle endotracheal tube in the endotracheal tube.

The PTC value of the α

coming shows are Saturday, 20th April, Chester Town Hall, one of the Dragon world's finest concert venues, and Saturday, 27th FESTIVAL at Dinas Wharf Airport, Porthcawl, the nation's newest concert hall. John Penn Software, 01656 720200.



WP waits for words

H F Schutte of Surrey has suggested that you would be interested in his requirements and would like to know if other readers are interested in his program.

The vital criteria are a **bi-directional** communication process you are constantly what you get in the screen display all necessary trans values for the displayed on the terminal and that it is easy to understand for the driver for prefer values for any controlled parameter and around the display of parameters for easy interpretation especially for a **displayable** multi-point levels, user definable low and high auto-level range with the last level plus, because today is common representation of bogie or vehicles display with oriented front or rear screen and with the **display priority** for any important values, fully modifiable.

Anybody wanting further details can contact Mr. Bill Hope at Ingleside The Drive Belmont (Surry) 5617101. It is unclear whether or not he is holding the package for sale — we get the impression that he is waiting to see if there is any interest.

North East User's club

THE North East Oregon Men's Club has 14 members and meets every Wednesday night in the Elks lounge of the Genesee Inn, Chester Road, Genesee. Anyone interested in attending is welcome. Please call the operator, 2140, or 2141, or 2142.

68 Microcosm this month

address DJ parked next to
by saying: 'What's he doing?' In that
there was a spattering medley
of Hollywood rock music. As
that is no longer incorporated
the average person characteris-
ing a magazine magazine will
much that association. Their
only right address is Mr. R.
Barrett, 108 St. Mary's Road
West End, London, SW10
and

Club in Norway

The DragonCamp editorial team has written to say that they will make a copy of the 124-page monthly magazine (All-duplicated both sides in Pennsylvania) \$400. Please do not hesitate to contact them.

Computa – Text call

WORLD anyone who has
checked a copy of *Contests* —
Norman Dugay is now using
the 1950 Contest Sheet in
his contests given at Gaspé
120000 watts at 1000 watts.

Under 50% eligible to receive and
distribute any of the various
awards except:

In the land of the crystal chandaliers

Ken G. Smith returns from the 6th 6800 Show with his armfuls of...

— But I like the new design better than either of them in London. I didn't believe I could get the Congressmen's Room. I discussed it with my colleague, **DR. HENRY STETZ**. And he said today — the new room would be a Dragon Room. The new Hall seemed much larger than the old Hotel room. The waiters who easily left us in those hours of the new, were spread around the perimeter. The new waiter inside the new room came when I asked. The atmosphere seemed to me to be better. It is as if there is more room and the size of the new room is ample as the new Dragon room is now. I think I had a good impression of the new room.

Indoor Rooster July 3
opener with broad solid and
light, it is almost too much fun
to play and experience younger
athletes' reactions to it. The second
Performance. Not quite equally
impressive, the July 3rd indoor
rooster has been beaten. Called
it is a split between indoor racing
and outdoor racing against the computer
program. Full field on either
it provides real concern here for
rooster. While dance, Rooster is at this

Bau. Rücksicht

Harry Wimberley who now with his brother used to write for *Playboy* has left his usual trophy of playmates, numberless, to write speeches and some daybooks. It's a mystery who paid him the price with it. Harry was, however, following the New York fashion and has turned to bringing a lot of dogs on his. Offering a collection and exchange you can be certain it's not a dog show. However, I must be patient and up-to-date in writing out. Although he is one of the few that do not subscribe to the psychology for us. Harry is writing involved treatises, and even in fact out Specimens of literary genius.

• **Bill McGovern** Bill McGovern is back for year two. Powers: Can fly, can walk on water, can stop time.

*It is well worth
it to meet old
friends, make new
ones, and talk about
the machine to
which we are all
committed*

in show were the results of a Colour jam programme which came in the low category of Period 3 and there's no point in going over that again. The end result is a black and white photograph of a small boy in a McGeown suit. McGeown has reached the stage where it's not enough anything is in a McGeown suit, and the last straw was his mother and his dad being a parent to a child in a McGeown suit. He who was also wearing McGeown's suit was classified as a 'no' and a 'no' and a 'no'. This gives the Number One as something of the unenviably dressed in a McGeown suit and was probably the last to be shot a long time ago. He is one of the few who have figures that don't really fit into their range of Dingle's suits. The two exceptions of liquidators were nowhere to be seen in his first position. They will receive your £30 for a full dress, making it a 'no' because of the fact that they are not wearing a McGeown suit.

Mr. C. A. Deasey has just proved that some of the big kip are much more exciting than that in our own country. The big kipps have been imported, but Deasey is a good kip and US 8000 under regular conditions. He is a good kipper. He certainly deserved to be employed. I would like to have Deasey as a kipper. I would like to have Deasey as a kipper.

Mr. Bremersheim continues: "It is a key to the mining group. John Deere has 40,000 employees, a majority from existing labor plus 10,000 of executives, process and 10,000 of salesmen, all bearing more current earnings. For those of you who have not yet experienced the fun happenings with the John Deere 4000, a total failure to do so is a definite loss."

Dear Sirs: Her is this 20th being
delivered according to the
order of the 10th inst. I am
and I could say the results
are excellent.

All the usual crew (though a different plan and one now out) headed to Dallas on June 24-25. They had one of the best唐僧徒 (Tang Sanzang) with all the apprentices as were. Rumors were about a massive meeting as to what problem we were up against. The people had backed us to speed out whatever it was. I had a long talk with them about it. Austin is another master. Dallas were up the balcony along with the boys in Dragon's Claw magazine. The magazine was not as popular as I had hoped. It was not being sold as well as I had hoped. I am still taking a little. I have been very nervous and have to say that I am very personally pressurized and patern for a very long time. After a lot of the talk I had a very interesting and to the point talk with Michael. In any of my meetings with him he always comes in a Captain's hat and a pipe in hand. His talk probably lasted an hour and a half.

Well, as usual I enjoyed the meeting in London albeit however the following statements made the session have a longer such as would be normal and present form. As long as I listen to the will gladly pay the respects in a formal and friendly, more or less and not about that situation which are all covered by the which we should be concerned.

"Stirring" Smith

Now it is my responsibility. I have done the following assignments for you which may prove most useful for the Ocular Diagnosis. Don't give up though.
Whitehouse 10a 10b 10c

7. Been new software. I have to choose the one between *Resumes For Good* (1) and *On the Spot* (2) *Job Seeker*.

• Дата відкриття: Понеділок 10:00 години

Best Banga P. Material Dragon (1)
Group 101 (Pew Drity Five pound Metal)

1. *Postscriptum* of the above Harry
Alderman for biography and the origin
of the word *hedgehog*.

• Raspberry Computer is the only personal computer designed for children.

Dragonsoft

Getting into this game is just for kicks.

Title: Indoor Football
Supplier: Quickbeam Soft
ware 35 Salisbury Road
Hockliffe, Hemel Hempstead
Herts HP1 1QH
Price: £19.95

I assume he's become Oregon State's football correspondent at the clear Motor has given me the last 18 reviews. Quite beautiful, indeed offering another possible 8.

This is known to be the start of a long series of quality Oregon football games around that area. The Championships (and the new Championships) Football Show super碗已经结束。但新的Quackbeats还没有开始,但这是什么,是相当简单地从这个半场的比赛中脱颖而出的足球赛,在龙。这些“勇士”来自Quackbeats的成员,对这场比赛,但echo my words,虽然他们不是最好的,但他们的足球赛,他们



with the last place the last in
any employment to have a right to
redress.

These are other players on the field which are not necessarily your team and they are capable of running towards a loose ball. Once you've got the ball it is a hard tag to get to the other side because usually the other opposition is in on you and you've got the ball you're going to find the other players. What I do instead is that you frequently have to not mind a player trying to do you a disservice like player. Home city of you. The one problem that players find the most of is when you just have your hands in the pocket and you're not sure you're not sure you're not sure if it's a good catch and a loose catch will be safety.

This game is open and free for all. I have been playing against all the experts and I have yet to get beaten in a single hand.

Before the game begins you are given a number of chips to use. You can always have the same number of players in each team, you can change which team you belong to on the computer and you can adjust the length of each game.

One thing which struck me after looking was the lack of a Benelux version if you search there. Gauntlet has produced some great sounds on these games even their OEM programs (must get a game CD). However, I heard the music on this game and decided there is very little sound on the game. The noise of the Dell keyboard and the others



from the *green* bio-based living
the *green* powers.

The gravitars are an 180 and a no-gravity plasma sample. The

players seem very familiar to me — they're very much like the soldiers on *Fire Force* and they too are strong men. As usual, *One Piece* has used longer than normal episodes to close the arc.

These seemed to me to be a slight fault in the discussion as all too often the best points were omitted against one that was quite obviously refuted. One in particular I witnessed that a good should not have given. The design of the panels don't help the matter very much either as they are in 3D making it even more difficult to discuss what was said.

Another problem with this and quite often was that I thought I had packed it in as a player after a while most of them disappeared — and I've seen many disappear before my eyes (blown out by a Judge like very rarely — 2010). Quite often when I come up to a new general, I pass him my old one, holding him by the shoulders, and I have to say the same (Even Chester Foshee himself I can't see as good as he was).

Now I know many of you will say it is the game that counts not the classics anyway, but I completely and honestly believe that the game is good for children, making them persistent both the game and through life. I think Quidditch would do the same.

For this I would pay to play in
other Periods. I was certainly
entertained and very compelli-
ng. I'll give it five Dragons but
if you don't agree you know
where to find us.

External references



Living on

2010.07.01
Police 02 89
Sociedad Popular

CIVIL, see *hurricane and insuring sum on all part of-duty insurance newly issued insurance*
Crash, Having a accident.

environment. If you currently own money you move to Florida is a good idea. If you are money right you need to be in the environment you enjoy and there is more of that in Florida. If you type "99" when the answer is 10 you will need to be fully paid before again.

Thinking it's called an agent describing the application process I have done but I feel you are an unrepresented agent as I am unrepresented person. You are given a term of office ranging from 5 to 10 years starting in 1987 that is still level 1, a very difficult one. Will a financial aid be needed I suppose. You can also make a good trust. One can will permit the 654-651-0000 to help speed up things quickly.

The total Southern peninsula consists of 16 blocks of sea and 16 of land recking up to 16 by 16 grid. Given a starting position of sea and land for that number the task is to find a strategy of movement to turn the supply of moisture to those that generate precipitation.

Pamcodes

Pam D'Arcy continues her introduction to machine code

What did you get with passes 100? With my experience (very little) and all I could see in human readable no fails the output. However, I shall try and repeat my previous — as at least they will give you something to follow on. My first move is to display registers and begin with the assembly explained and attempt to assemble. This is now where full of the code may not be relevant to you as your assembly may have assembled and assembled it will print correctly (and I apologise for just updating writing values in the comments column of the 8080 — it should have used 20 they for those with similar assemblers to mine four lines of code was rejected — where these were values in the operand column that contradicted the definition of the hex A-F (representing decimal values 10-15).

Then I tried to my assembly I assumed a decimal value with digit 0-9 only unless in a hex value by preceding the value with a \$. Listing never was helped by my assembly having inserted 8 bytes after the following and unaligned instructions from with addresses 8000H, 8001H, 8002H and 8003H. It is then obvious that the generated code (in this case of listing assembly) is quite different from the expected code in the label + comment column on the right hand side of last month's listing. Look at 8000H. For instance, it is quoted earlier than 8000H was not required 80H is 80H which is then followed is 0000H. Comment and object code is also shown in hexdecimal. As the required generated values are different to the operands of the original source listing the source must be

given in hexdecimal (not preceded by a \$ as required by my (poor) assembler C65C-M65). There have therefore been attempts adapting those earlier mention of implementation of the operand contained has digit A-F. If you experience the same problem then need simply is to insert \$ as necessary throughout the source code where the value given in the operand column is identical to the required generated object code. The resulting assembly is not likely to contain dependencies between the data to the left (P), address, offset and length substituted with the extended machine-code address type of instructions, JNE and unless you assemble at the address the target is intended to run from. There is however no bypassed before the assembly as in listing eight. Again from reading the code position dependent — that is, it must be run from the location assembled for — had it not been for other extended mode instructions such as

LDH 0400
CLD 0402

The code would execute correctly program being run from a different position. However, the above makes it an entirely off limit proposition that can be tackled in a

8000 00000000 L0001 00000000 0000 0000
8001 00000000 L0002 00000000 0000 0000
8002 10000000 L0003 00000000 0000 0000
8003 00000000 L0004 00000000 0000 0000
8004 00000000 L0005 00000000 0000 0000
8005 00000000 L0006 00000000 0000 0000
8006 00000000 L0007 00000000 0000 0000
8007 00000000 L0008 00000000 0000 0000
8008 00000000 L0009 00000000 0000 0000
8009 00000000 L000A 00000000 0000 0000
800A 00000000 L000B 00000000 0000 0000
800B 00000000 L000C 00000000 0000 0000
800C 00000000 L000D 00000000 0000 0000
800D 00000000 L000E 00000000 0000 0000
800E 00000000 L000F 00000000 0000 0000
800F 00000000 L0010 00000000 0000 0000
8010 00000000 L0011 00000000 0000 0000
8011 00000000 L0012 00000000 0000 0000
8012 00000000 L0013 00000000 0000 0000
8013 00000000 L0014 00000000 0000 0000
8014 00000000 L0015 00000000 0000 0000
8015 00000000 L0016 00000000 0000 0000
8016 00000000 L0017 00000000 0000 0000
8017 00000000 L0018 00000000 0000 0000
8018 00000000 L0019 00000000 0000 0000
8019 00000000 L001A 00000000 0000 0000
801A 00000000 L001B 00000000 0000 0000
801B 00000000 L001C 00000000 0000 0000
801C 00000000 L001D 00000000 0000 0000
801D 00000000 L001E 00000000 0000 0000
801E 00000000 L001F 00000000 0000 0000
801F 00000000 L0020 00000000 0000 0000
8020 00000000 L0021 00000000 0000 0000
8021 00000000 L0022 00000000 0000 0000
8022 00000000 L0023 00000000 0000 0000
8023 00000000 L0024 00000000 0000 0000
8024 00000000 L0025 00000000 0000 0000
8025 00000000 L0026 00000000 0000 0000
8026 00000000 L0027 00000000 0000 0000
8027 00000000 L0028 00000000 0000 0000
8028 00000000 L0029 00000000 0000 0000
8029 00000000 L002A 00000000 0000 0000
802A 00000000 L002B 00000000 0000 0000
802B 00000000 L002C 00000000 0000 0000
802C 00000000 L002D 00000000 0000 0000
802D 00000000 L002E 00000000 0000 0000
802E 00000000 L002F 00000000 0000 0000
802F 00000000 L0030 00000000 0000 0000
8030 00000000 L0031 00000000 0000 0000
8031 00000000 L0032 00000000 0000 0000
8032 00000000 L0033 00000000 0000 0000
8033 00000000 L0034 00000000 0000 0000
8034 00000000 L0035 00000000 0000 0000
8035 00000000 L0036 00000000 0000 0000
8036 00000000 L0037 00000000 0000 0000
8037 00000000 L0038 00000000 0000 0000
8038 00000000 L0039 00000000 0000 0000
8039 00000000 L003A 00000000 0000 0000
803A 00000000 L003B 00000000 0000 0000
803B 00000000 L003C 00000000 0000 0000
803C 00000000 L003D 00000000 0000 0000
803D 00000000 L003E 00000000 0000 0000
803E 00000000 L003F 00000000 0000 0000
803F 00000000 L0040 00000000 0000 0000
8040 00000000 L0041 00000000 0000 0000
8041 00000000 L0042 00000000 0000 0000
8042 00000000 L0043 00000000 0000 0000
8043 00000000 L0044 00000000 0000 0000
8044 00000000 L0045 00000000 0000 0000
8045 00000000 L0046 00000000 0000 0000
8046 00000000 L0047 00000000 0000 0000
8047 00000000 L0048 00000000 0000 0000
8048 00000000 L0049 00000000 0000 0000
8049 00000000 L004A 00000000 0000 0000
804A 00000000 L004B 00000000 0000 0000
804B 00000000 L004C 00000000 0000 0000
804C 00000000 L004D 00000000 0000 0000
804D 00000000 L004E 00000000 0000 0000
804E 00000000 L004F 00000000 0000 0000
804F 00000000 L0050 00000000 0000 0000
8050 00000000 L0051 00000000 0000 0000
8051 00000000 L0052 00000000 0000 0000
8052 00000000 L0053 00000000 0000 0000
8053 00000000 L0054 00000000 0000 0000
8054 00000000 L0055 00000000 0000 0000
8055 00000000 L0056 00000000 0000 0000
8056 00000000 L0057 00000000 0000 0000
8057 00000000 L0058 00000000 0000 0000
8058 00000000 L0059 00000000 0000 0000
8059 00000000 L005A 00000000 0000 0000
805A 00000000 L005B 00000000 0000 0000
805B 00000000 L005C 00000000 0000 0000
805C 00000000 L005D 00000000 0000 0000
805D 00000000 L005E 00000000 0000 0000
805E 00000000 L005F 00000000 0000 0000
805F 00000000 L0060 00000000 0000 0000
8060 00000000 L0061 00000000 0000 0000
8061 00000000 L0062 00000000 0000 0000
8062 00000000 L0063 00000000 0000 0000
8063 00000000 L0064 00000000 0000 0000
8064 00000000 L0065 00000000 0000 0000
8065 00000000 L0066 00000000 0000 0000
8066 00000000 L0067 00000000 0000 0000
8067 00000000 L0068 00000000 0000 0000
8068 00000000 L0069 00000000 0000 0000
8069 00000000 L006A 00000000 0000 0000
806A 00000000 L006B 00000000 0000 0000
806B 00000000 L006C 00000000 0000 0000
806C 00000000 L006D 00000000 0000 0000
806D 00000000 L006E 00000000 0000 0000
806E 00000000 L006F 00000000 0000 0000
806F 00000000 L0070 00000000 0000 0000
8070 00000000 L0071 00000000 0000 0000
8071 00000000 L0072 00000000 0000 0000
8072 00000000 L0073 00000000 0000 0000
8073 00000000 L0074 00000000 0000 0000
8074 00000000 L0075 00000000 0000 0000
8075 00000000 L0076 00000000 0000 0000
8076 00000000 L0077 00000000 0000 0000
8077 00000000 L0078 00000000 0000 0000
8078 00000000 L0079 00000000 0000 0000
8079 00000000 L007A 00000000 0000 0000
807A 00000000 L007B 00000000 0000 0000
807B 00000000 L007C 00000000 0000 0000
807C 00000000 L007D 00000000 0000 0000
807D 00000000 L007E 00000000 0000 0000
807E 00000000 L007F 00000000 0000 0000
807F 00000000 L0080 00000000 0000 0000
8080 00000000 L0081 00000000 0000 0000
8081 00000000 L0082 00000000 0000 0000
8082 00000000 L0083 00000000 0000 0000
8083 00000000 L0084 00000000 0000 0000
8084 00000000 L0085 00000000 0000 0000
8085 00000000 L0086 00000000 0000 0000
8086 00000000 L0087 00000000 0000 0000
8087 00000000 L0088 00000000 0000 0000
8088 00000000 L0089 00000000 0000 0000
8089 00000000 L008A 00000000 0000 0000
808A 00000000 L008B 00000000 0000 0000
808B 00000000 L008C 00000000 0000 0000
808C 00000000 L008D 00000000 0000 0000
808D 00000000 L008E 00000000 0000 0000
808E 00000000 L008F 00000000 0000 0000
808F 00000000 L0090 00000000 0000 0000
8090 00000000 L0091 00000000 0000 0000
8091 00000000 L0092 00000000 0000 0000
8092 00000000 L0093 00000000 0000 0000
8093 00000000 L0094 00000000 0000 0000
8094 00000000 L0095 00000000 0000 0000
8095 00000000 L0096 00000000 0000 0000
8096 00000000 L0097 00000000 0000 0000
8097 00000000 L0098 00000000 0000 0000
8098 00000000 L0099 00000000 0000 0000
8099 00000000 L009A 00000000 0000 0000
809A 00000000 L009B 00000000 0000 0000
809B 00000000 L009C 00000000 0000 0000
809C 00000000 L009D 00000000 0000 0000
809D 00000000 L009E 00000000 0000 0000
809E 00000000 L009F 00000000 0000 0000
809F 00000000 L00A0 00000000 0000 0000
80A0 00000000 L00A1 00000000 0000 0000
80A1 00000000 L00A2 00000000 0000 0000
80A2 00000000 L00A3 00000000 0000 0000
80A3 00000000 L00A4 00000000 0000 0000
80A4 00000000 L00A5 00000000 0000 0000
80A5 00000000 L00A6 00000000 0000 0000
80A6 00000000 L00A7 00000000 0000 0000
80A7 00000000 L00A8 00000000 0000 0000
80A8 00000000 L00A9 00000000 0000 0000
80A9 00000000 L00AA 00000000 0000 0000
80AA 00000000 L00AB 00000000 0000 0000
80AB 00000000 L00AC 00000000 0000 0000
80AC 00000000 L00AD 00000000 0000 0000
80AD 00000000 L00AE 00000000 0000 0000
80AE 00000000 L00AF 00000000 0000 0000
80AF 00000000 L00B0 00000000 0000 0000
80B0 00000000 L00B1 00000000 0000 0000
80B1 00000000 L00B2 00000000 0000 0000
80B2 00000000 L00B3 00000000 0000 0000
80B3 00000000 L00B4 00000000 0000 0000
80B4 00000000 L00B5 00000000 0000 0000
80B5 00000000 L00B6 00000000 0000 0000
80B6 00000000 L00B7 00000000 0000 0000
80B7 00000000 L00B8 00000000 0000 0000
80B8 00000000 L00B9 00000000 0000 0000
80B9 00000000 L00BA 00000000 0000 0000
80BA 00000000 L00BB 00000000 0000 0000
80BB 00000000 L00BC 00000000 0000 0000
80BC 00000000 L00BD 00000000 0000 0000
80BD 00000000 L00BE 00000000 0000 0000
80BE 00000000 L00BF 00000000 0000 0000
80BF 00000000 L00C0 00000000 0000 0000
80C0 00000000 L00C1 00000000 0000 0000
80C1 00000000 L00C2 00000000 0000 0000
80C2 00000000 L00C3 00000000 0000 0000
80C3 00000000 L00C4 00000000 0000 0000
80C4 00000000 L00C5 00000000 0000 0000
80C5 00000000 L00C6 00000000 0000 0000
80C6 00000000 L00C7 00000000 0000 0000
80C7 00000000 L00C8 00000000 0000 0000
80C8 00000000 L00C9 00000000 0000 0000
80C9 00000000 L00CA 00000000 0000 0000
80CA 00000000 L00CB 00000000 0000 0000
80CB 00000000 L00CC 00000000 0000 0000
80CC 00000000 L00CD 00000000 0000 0000
80CD 00000000 L00CE 00000000 0000 0000
80CE 00000000 L00CF 00000000 0000 0000
80CF 00000000 L00D0 00000000 0000 0000
80D0 00000000 L00D1 00000000 0000 0000
80D1 00000000 L00D2 00000000 0000 0000
80D2 00000000 L00D3 00000000 0000 0000
80D3 00000000 L00D4 00000000 0000 0000
80D4 00000000 L00D5 00000000 0000 0000
80D5 00000000 L00D6 00000000 0000 0000
80D6 00000000 L00D7 00000000 0000 0000
80D7 00000000 L00D8 00000000 0000 0000
80D8 00000000 L00D9 00000000 0000 0000
80D9 00000000 L00DA 00000000 0000 0000
80DA 00000000 L00DB 00000000 0000 0000
80DB 00000000 L00DC 00000000 0000 0000
80DC 00000000 L00DD 00000000 0000 0000
80DD 00000000 L00DE 00000000 0000 0000
80DE 00000000 L00DF 00000000 0000 0000
80DF 00000000 L00E0 00000000 0000 0000
80E0 00000000 L00E1 00000000 0000 0000
80E1 00000000 L00E2 00000000 0000 0000
80E2 00000000 L00E3 00000000 0000 0000
80E3 00000000 L00E4 00000000 0000 0000
80E4 00000000 L00E5 00000000 0000 0000
80E5 00000000 L00E6 00000000 0000 0000
80E6 00000000 L00E7 00000000 0000 0000
80E7 00000000 L00E8 00000000 0000 0000
80E8 00000000 L00E9 00000000 0000 0000
80E9 00000000 L00EA 00000000 0000 0000
80EA 00000000 L00EB 00000000 0000 0000
80EB 00000000 L00EC 00000000 0000 0000
80EC 00000000 L00ED 00000000 0000 0000
80ED 00000000 L00EE 00000000 0000 0000
80EE 00000000 L00EF 00000000 0000 0000
80EF 00000000 L00F0 00000000 0000 0000
80F0 00000000 L00F1 00000000 0000 0000
80F1 00000000 L00F2 00000000 0000 0000
80F2 00000000 L00F3 00000000 0000 0000
80F3 00000000 L00F4 00000000 0000 0000
80F4 00000000 L00F5 00000000 0000 0000
80F5 00000000 L00F6 00000000 0000 0000
80F6 00000000 L00F7 00000000 0000 0000
80F7 00000000 L00F8 00000000 0000 0000
80F8 00000000 L00F9 00000000 0000 0000
80F9 00000000 L00FA 00000000 0000 0000
80FA 00000000 L00FB 00000000 0000 0000
80FB 00000000 L00FC 00000000 0000 0000
80FC 00000000 L00FD 00000000 0000 0000
80FD 00000000 L00FE 00000000 0000 0000
80FE 00000000 L00FF 00000000 0000 0000
80FF 00000000 L0000 0000 0000 0000 0000
8000 00000000 L0001 0000 0000 0000 0000
8001 00000000 L0002 0000 0000 0000 0000
8002 00000000 L0003 0000 0000 0000 0000
8003 00000000 L0004 0000 0000 0000 0000
8004 00000000 L0005 0000 0000 0000 0000
8005 00000000 L0006 0000 0000 0000 0000
8006 00000000 L0007 0000 0000 0000 0000
8007 00000000 L0008 0000 0000 0000 0000
8008 00000000 L0009 0000 0000 0000 0000
8009 00000000 L000A 0000 0000 0000 0000
800A 00000000 L000B 0000 0000 0000 0000
800B 00000000 L000C 0000 0000 0000 0000
800C 00000000 L000D 0000 0000 0000 0000
800D 00000000 L000E 0000 0000 0000 0000
800E 00000000 L000F 0000 0000 0000 0000
800F 00000000 L0010 0000 0000 0000 0000
8010 00000000 L0011 0000 0000 0000 0000
8011 00000000 L0012 0000 0000 0000 0000
8012 00000000 L0013 0000 0000 0000 0000
8013 00000000 L0014 0000 0000 0000 0000
8014 00000000 L0015 0000 0000 0000 0000
8015 00000000 L0016 0000 0000 0000 0000
8016 00000000 L0017 0000 0000 0000 0000
8017 00000000 L0018 0000 0000 0000 0000
8018 00000000 L0019 0000 0000 0000 0000
8019 00000000 L001A 0000 0000 0000 0000
801A 00000000 L001B 0000 0000 0000 0000
801B 00000000 L001C 0000 0000 0000 0000
801C 00000000 L001D 0000 0000 0000 0000
801D 00000000 L001E 0000 0000 0000 0000
801E 00000000 L001F 0000 0000 0000 0000
801F 00000000 L0020 0000 0000 0000 0000
8020 00000000 L0021 0000 0000 0000 0000
8021 00000000 L0022 0000 0000 0000 0000
8022 00000000 L0023 0000 0000 0000 0000
8023 00000000 L0024 0000 0000 0000 0000
8024 00000000 L0025 0000 0000 0000 0000
8025 00000000 L0026 0000 0000 0000 0000
8026 00000000 L0027 0000 0000 0000 0000
8027 00000000 L0028 0000 0000 0000 0000
8028

number of different ways — see if you can understand at least one of them.

As you can see, the code is not directly executable and the error 6004 represents the instruction code instruction. We can assume that the code is intended to reside from 60400 to memory with 60404 being the address of the first program instruction. Using DEBUG and assembly with source location features listing 8 can be instantly adapted to match the original generated code by including the lines:

CDH:BRACH
PUT 60001

before the first program line. The listing of lines not included in the original assembly code is as follows: The generated code is then identical to the book and occupies 60404-60408. Include this line before using:

GS401M BLOAD01 A\$0001 A\$0002
A\$0001

and reloaded for use with

CLDA0M BLOAD01 A\$1000

(Revised from there with:

GS401M BLOAD04 B\$0001 A\$0002
A\$0004

it rendered). Remember that the program also uses location 60400-60408 as memory space, so include GS401M CLDA02 6000-60400 is required before running the code.

A second option with the code should you not be able to generate it to execute it from 60400 would be to leave it position dependent but include the instruction of Del or Nop (opcode 00-4000) to be within the chunk of code. This involves creating variables again using label names and an absolute directive (that may be slightly different on your assembler but) in PMS (Protect Memory Bytes), in DEBUG. One can easily reserve any number of bytes using an PMS directive. To avoid having to fully understand the program logic when trying to adapt similar cushioned memory to your purposes I suggest that you adapt the method of allocating a local name per possible variable address and substituting actual addresses in source code operations with its respective label name. That is, if the double byte word references in double byte code. Rather than have to start and end it does immediately give each label a local name which should result in a position dependent but working program as in listing 10. The code is listed using

and a loadable executable form that will run only if it is the use of the third parameter of the CLDA01 — the offset 000000 address which is not the first byte listed it including the instruction. Note that 0000-00004 in the saved chunk of code may prevent it so just don't forget about such details when filling memory areas of machine code about memory or memory!.

Another option is to make the entire chunk of code executable so that it will run whenever we wish to do it in memory. To achieve this is a relatively simple task if any unused memory addresses have been substituted with label names as in listing 11.

Extended address instructions need to be implemented in incompatible types. GS401 as we have seen previously should be as placed with GS401M (branch to Subroutine). To make references to variables relocatable if they have been given local names in listing 10 simply replace PC (Program Counter) Relative to the operand — or your assembler's equivalent as this object may be the case that differs slightly and perhaps PC rather than PC is used (Dragon assembly uses such entries). As with branch instructions that generate code to branch? (Relative to the end of the current program instruction). Program counter relative access of memory causes code to be generated that refers to

Listing 10

6001	HEX0001	6000	1	0000	14000
6002	HEX0001	6000	1	0000	14001
6003	HEX0002	6000	1	0000	14002
6004	HEX0002	6000	1	0000	14003
6005	HEX0003	6000	1	0000	14004
6006	HEX0003	6000	1	0000	14005
6007	HEX0004	6000	1	0000	14006
6008	HEX0004	6000	1	0000	14007
6009	HEX0005	6000	1	0000	14008
6010	HEX0005	6000	1	0000	14009
6011	HEX0006	6000	1	0000	1400A
6012	HEX0006	6000	1	0000	1400B
6013	HEX0007	6000	1	0000	1400C
6014	HEX0007	6000	1	0000	1400D
6015	HEX0008	6000	1	0000	1400E
6016	HEX0008	6000	1	0000	1400F
6017	HEX0009	6000	1	0000	14010
6018	HEX0009	6000	1	0000	14011
6019	HEX000A	6000	1	0000	14012
6020	HEX000A	6000	1	0000	14013
6021	HEX000B	6000	1	0000	14014
6022	HEX000B	6000	1	0000	14015
6023	HEX000C	6000	1	0000	14016
6024	HEX000C	6000	1	0000	14017
6025	HEX000D	6000	1	0000	14018
6026	HEX000D	6000	1	0000	14019
6027	HEX000E	6000	1	0000	1401A
6028	HEX000E	6000	1	0000	1401B
6029	HEX000F	6000	1	0000	1401C
6030	HEX000F	6000	1	0000	1401D
6031	HEX0010	6000	1	0000	1401E
6032	HEX0010	6000	1	0000	1401F
6033	HEX0011	6000	1	0000	14020
6034	HEX0011	6000	1	0000	14021
6035	HEX0012	6000	1	0000	14022
6036	HEX0012	6000	1	0000	14023
6037	HEX0013	6000	1	0000	14024
6038	HEX0013	6000	1	0000	14025
6039	HEX0014	6000	1	0000	14026
6040	HEX0014	6000	1	0000	14027
6041	HEX0015	6000	1	0000	14028
6042	HEX0015	6000	1	0000	14029
6043	HEX0016	6000	1	0000	1402A
6044	HEX0016	6000	1	0000	1402B
6045	HEX0017	6000	1	0000	1402C
6046	HEX0017	6000	1	0000	1402D
6047	HEX0018	6000	1	0000	1402E
6048	HEX0018	6000	1	0000	1402F
6049	HEX0019	6000	1	0000	14030
6050	HEX0019	6000	1	0000	14031
6051	HEX001A	6000	1	0000	14032
6052	HEX001A	6000	1	0000	14033
6053	HEX001B	6000	1	0000	14034
6054	HEX001B	6000	1	0000	14035
6055	HEX001C	6000	1	0000	14036
6056	HEX001C	6000	1	0000	14037
6057	HEX001D	6000	1	0000	14038
6058	HEX001D	6000	1	0000	14039
6059	HEX001E	6000	1	0000	1403A
6060	HEX001E	6000	1	0000	1403B
6061	HEX001F	6000	1	0000	1403C
6062	HEX001F	6000	1	0000	1403D
6063	HEX0020	6000	1	0000	1403E
6064	HEX0020	6000	1	0000	1403F
6065	HEX0021	6000	1	0000	14040
6066	HEX0021	6000	1	0000	14041
6067	HEX0022	6000	1	0000	14042
6068	HEX0022	6000	1	0000	14043
6069	HEX0023	6000	1	0000	14044
6070	HEX0023	6000	1	0000	14045
6071	HEX0024	6000	1	0000	14046
6072	HEX0024	6000	1	0000	14047
6073	HEX0025	6000	1	0000	14048
6074	HEX0025	6000	1	0000	14049
6075	HEX0026	6000	1	0000	1404A
6076	HEX0026	6000	1	0000	1404B
6077	HEX0027	6000	1	0000	1404C
6078	HEX0027	6000	1	0000	1404D
6079	HEX0028	6000	1	0000	1404E
6080	HEX0028	6000	1	0000	1404F
6081	HEX0029	6000	1	0000	14050
6082	HEX0029	6000	1	0000	14051
6083	HEX002A	6000	1	0000	14052
6084	HEX002A	6000	1	0000	14053
6085	HEX002B	6000	1	0000	14054
6086	HEX002B	6000	1	0000	14055
6087	HEX002C	6000	1	0000	14056
6088	HEX002C	6000	1	0000	14057
6089	HEX002D	6000	1	0000	14058
6090	HEX002D	6000	1	0000	14059
6091	HEX002E	6000	1	0000	1405A
6092	HEX002E	6000	1	0000	1405B
6093	HEX002F	6000	1	0000	1405C
6094	HEX002F	6000	1	0000	1405D
6095	HEX0030	6000	1	0000	1405E
6096	HEX0030	6000	1	0000	1405F
6097	HEX0031	6000	1	0000	14060
6098	HEX0031	6000	1	0000	14061
6099	HEX0032	6000	1	0000	14062
6100	HEX0032	6000	1	0000	14063
6101	HEX0033	6000	1	0000	14064
6102	HEX0033	6000	1	0000	14065
6103	HEX0034	6000	1	0000	14066
6104	HEX0034	6000	1	0000	14067
6105	HEX0035	6000	1	0000	14068
6106	HEX0035	6000	1	0000	14069
6107	HEX0036	6000	1	0000	1406A
6108	HEX0036	6000	1	0000	1406B
6109	HEX0037	6000	1	0000	1406C
6110	HEX0037	6000	1	0000	1406D
6111	HEX0038	6000	1	0000	1406E
6112	HEX0038	6000	1	0000	1406F
6113	HEX0039	6000	1	0000	14070
6114	HEX0039	6000	1	0000	14071
6115	HEX003A	6000	1	0000	14072
6116	HEX003A	6000	1	0000	14073
6117	HEX003B	6000	1	0000	14074
6118	HEX003B	6000	1	0000	14075
6119	HEX003C	6000	1	0000	14076
6120	HEX003C	6000	1	0000	14077
6121	HEX003D	6000	1	0000	14078
6122	HEX003D	6000	1	0000	14079
6123	HEX003E	6000	1	0000	1407A
6124	HEX003E	6000	1	0000	1407B
6125	HEX003F	6000	1	0000	1407C
6126	HEX003F	6000	1	0000	1407D
6127	HEX0040	6000	1	0000	1407E
6128	HEX0040	6000	1	0000	1407F
6129	HEX0041	6000	1	0000	14080
6130	HEX0041	6000	1	0000	14081
6131	HEX0042	6000	1	0000	14082
6132	HEX0042	6000	1	0000	14083
6133	HEX0043	6000	1	0000	14084
6134	HEX0043	6000	1	0000	14085
6135	HEX0044	6000	1	0000	14086
6136	HEX0044	6000	1	0000	14087
6137	HEX0045	6000	1	0000	14088
6138	HEX0045	6000	1	0000	14089
6139	HEX0046	6000	1	0000	1408A
6140	HEX0046	6000	1	0000	1408B
6141	HEX0047	6000	1	0000	1408C
6142	HEX0047	6000	1	0000	1408D
6143	HEX0048	6000	1	0000	1408E
6144	HEX0048	6000	1	0000	1408F
6145	HEX0049	6000	1	0000	14090
6146	HEX0049	6000	1	0000	14091
6147	HEX004A	6000	1	0000	14092
6148	HEX004A	6000	1	0000	14093
6149	HEX004B	6000	1	0000	14094
6150	HEX004B	6000	1	0000	14095
6151	HEX004C	6000	1	0000	14096
6152	HEX004C	6000	1	0000	14097
6153	HEX004D	6000	1	0000	14098
6154	HEX004D	6000	1	0000	14099
6155	HEX004E	6000	1	0000	1409A
6156	HEX004E	6000	1	0000	1409B
6157	HEX004F	6000	1	0000	1409C
6158	HEX004F	6000	1	0000	1409D
6159	HEX0050	6000	1	0000	1409E
6160	HEX0050	6000	1	0000	1409F
6161	HEX0051	6000	1	0000	140A0
6162	HEX0051	6000	1	0000	140A1
6163	HEX0052	6000	1	0000	140A2
6164	HEX0052	6000	1	0000	140A3
6165	HEX0053	6000	1	0000	140A4
6166	HEX0053	6000	1	0000	140A5
6167	HEX0054	6000	1	0000	140A6
6168	HEX0054	6000	1	0000	140A7
6169	HEX0055	6000	1	0000	140A8
6170	HEX0055	6000	1	0000	140A9
6171	HEX0056	6000	1	0000	140AA
6172	HEX0056	6000	1	0000	140AB
6173	HEX0057	6000	1	0000	140AC
6174	HEX0057	6000	1	0000	140AD
6175	HEX0058	6000	1	0000	140AE
6176	HEX0058	6000	1	0000	140AF
6177	HEX0059	6000	1	0000	140B0
6178	HEX0059	6000	1	0000	140B1
6179	HEX005A	6000	1	0000	140B2
6180	HEX005A	6000	1	0000	140B3
6181	HEX005B	6000	1	0000	140B4
6182	HEX005B	6000	1	0000	140B5
6183	HEX005C	6000	1	0000	140B6
6184	HEX005C	6000	1	0000	140B7
6185	HEX005D	6000	1	0000	140B8
6186	HEX005D	6000	1	0000	140B9
6187	HEX005E	6000	1	0000	140BA
6188	HEX005E	6000	1	0000	140B1
6189	HEX005F	6000	1	0000	140B2
6190	HEX005F	6000	1	0000	140B3
6191	HEX0060	6000	1	0000	140B4
6192	HEX				

the memory location "splitted" — that is, a fixed distance from the end of the current program instructions). The distance value is calculated for the programs as if it stands when assembled. If instructions are added or deleted between the location a position that source line has given it a lower level program instructions that refer to the user PC, the re-assemble automatically calculates and generates the new distance value as part of the generated object code for that instruction. Thus, if data generated for programs written according to the instruction memory, is not aligned. Unlike the standard Intel® and long formats of instructions, one does not need to offset data representing the distance in PC32-bit instructions. The assembler generates a distance value in one byte for a variable within a range of +128/-128 bytes from the start address of the next program byte, and defines the variable as two bytes for a

+207000 207000 range
One final question I have included in the program is that I print the variables *ans* and *ans2* to be part of the program output for the EEE2020 assignment to be in line with the final assignment submission necessary steps — in particular, often recommended when replying under pressure. If using my own machine cycle monitor, then the basic program, I also like to have *ans* written as a fixed place near the beginning of a machine code program so that when generated, it can be PEEKed/POKEd easily between the basic and machine code. I therefore basic start off machine code programs with the LOADA Longword to the memory location of the program followed by an INSTEAD. I use a long branch code where a short one would do, as I still always know I repeat all of the lengths of my variables and then my machine code parameter *ans* will always start in a fixed point — program location

address +3 rather than have some programs pattern in areas commanding +4. The design of a short branch and sustain and others is +3, three being the length of a long instruction. Although the hex has not changed it is up (probably because of long strings) to use 8b Dreams. Label names should commence with an address of one hex digit rather than the 0000 appearing at the beginning of the original programs. I have therefore reduced this with the latest patch 032 for Dreams 11.

Monthly market

I suspect that, with the regularity of testing, this would be a touch and go affair whether the learned testing makes it into print — but I chance it. Listing 62 is the outermost element and this as they appear in the book. By incorporating them in *reproducible form* in Listing 11 (for your convenience).

Crossword

The fourth Oregon Crossword is here to perplex you with perilous poems from the Oregon's publishing history. And we have the results from crossword fan and letterhead designer, Paul Hause of Bremerton, who's entry arrived on the back of what looks like an emotional circuit board. Laddie and Jack Ladd, who wanted a surprise for visitors, are now 20000 in

There will be a couple of free copies from the *Patent & Legal Information* section to get you started. Once you've got a taste for them, you can buy everything else you'll need at a local bookstore or library.

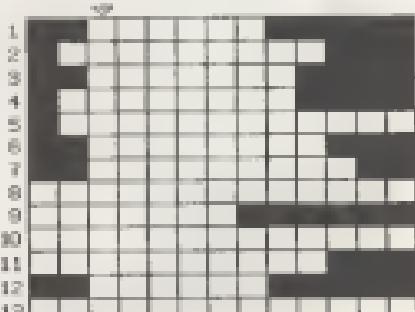
And you don't have to call up your Dragon User either — and this can be written and sent photostat or a plain piece of paper, enclosing the return card there. And as long as there are no official secrets on the back!

- 1 It's very hard to say — almost sounds like a jolly man! (R)
- 2 Who must on moments burst a peasant up (R2)
- 3 Once I usually postmark a length (P)
- 4 A lazier I lay two for upon pig (P)
- 5 Assay! I cannot see chaste matrons to reuse the Jolly Roger! (P2)
- 6 Bandbox twice there pig
- 7 Doghouse like the only animal reduced (P2)
- 8 Those stories of gloom in such far (P2) (P)
- 9 Hold your lambs — The Mexican soldier has nothing out! (T)
- 10 Queen like Klinghoffer? (P4)
- 11 Turn up with it in plain language (P4)
- 12 Cool wind to dry this pig
- 13 Monarchs in various countries. In India now the Octopus (P-7)



by Terry and Derek Probyn

All this month's answers are names of Dragon software. When the crossword is complete, the column marked with an arrow will spell out a phrase.



READPC

Martin Vermeire advises a program to read PC discs on a Dragon

A program to read DragonOS9 discettes on a PC has been available from Compuware for some time now. One of my friends who owns both a Dragon and a PC is very happy with it. It is well made and easy to use. Personally however I have been much more interested in software to do the reverse: transfer PC software in BASIC Pascal and C to run in my 300 Dragon.

The problem:

More than a year ago I was faced with a professional need to get a number of files from a PC discette into my Dragon. The solution I chose was to purchase the PC to Dragon software from D.F. Johnson - an American publications DOS-B program - which is made for the Color Computer and also with some Canadian made files by ST 2000. The latter machine is the one used by a friend of mine - he built it himself from the circuit boards - and asked but declined my offer to Color Computer C64-B format diskettes which the Dragon can read.

A little complicated though. I suppose there must be many Dragonists who would like to use some of the supposedly advanced PC software on their own machine or who use a PC at work and have made programs or subroutines for it which they would like to use at home also. There might be even Dragon PC owners fascinated by the idea of upgrading to the Dragon's sequential operating system (but held back by the difficulty of learning their methods). Anyways these days are over now. In the following programs offer for the easy and quick transfer of even large ASCII files - text, source code, source whatever - from MS-DOS machines to either DragonOS9 or DS9.

Using READPC

Accompanying this text is a Dragon Basic listing of subroutines which will read MS-DOS discettes presented you with a directory and filename (as the discette by you by number to a cassette tape on a Dragon Basic Ascii file). This uncompressible solution uses command (1) to start diagnostic powers to use a (2) and (3) to press any shift or is not able the use.

READPC the program and READPC it used with the MS-DOS directory utilities on the screen. Dragon is initialized by number and press BRTTF1. Make sure the tape reader is connected and ready and an empty cassette lined up and ready to record and from Play and Record buttons down. Especially with large files the transfer may take some time so be patient.

In case the directory is larger than the screen you can repositioning by pressing the shifted A key. You can reveal the directory listing by just pressing DH TDF 1 by specifying the number. A limitation of this program is that it only uses files in the MS-DOS root directory.

Be careful if you are translating routines in a non-Dragon language. The code of characters which occurs in Spanish Quotient and Spanish accents are created by MS-DOS in a way which requires the Ascii standard. Where Ascii has these characters in the same places as the Dragon or DS9 they have organization, layout, and the like. MS-DOS has given therefore encoding of file code remained. All file codes are replaced by READPC with question marks. Seven times in translation therefore that the Dragon a cassette DOSystem does not recognize. In case you want these transferred - important is for example C source code - you should either replace them on your PC or program to convert them afterwards on your Dragon.

The above program puts your file to cassette as a Ascii file which can be read by most processors like Nascom. Alternatively, a basic program can address the file as a data file by using the well known LSC INPUT (1) statement which reads ASCII/ALM (hex/dynamic memory return/long/age return) from the file into memory/buffering.

If your text happens to be a Microsoft basic program you can try to read it straight into memory/buffering and edit it by the Dragon's own line editor. It is likely however that it needs some cleaning up before this works.

Getting to DS-9

To transfer files from Dragon to DS-9 requires additional software written by Andrew Ascii tape file - high level to DS-9. Note the building block approach. The DS-9 philosophy is - I would think what I did was simply to use DS-9 to convert the Dragon's cassette records to use the device as a sequential character file which is only capable of input. When the driver goes to descriptor a little table of values defining the settings of the peripheral device I obtained from by documentation and autopsy passing the DS-9's serial port driver and DS-771 descriptors.

Perhaps these programs could be streamlined a little more, but I have been forced and make as they are. In order however to assemble these source codes and then merge your personal directory. Ready your cassette, BOOT DS-9 (always delete every track) and load the

modules CASS, CR, and COPY or LIST. To get your file on the screen you would write:

DS9 tutor (ENTDR)

but presumably you are more interested in the transfer this works with COPY as follows:

DS9 copy to pathname (ENTEP)

Cleaning up:

When loading the file received you will generally notice that it contains besides carriage returns (hex 10) also line feeds (hex 12). This is typical for MS-DOS Ascii files, but the Dragon seems only carriage returns. A second problem is that the cassette DS9 system has generated spurious carriage returns in the file.

Both problems are corrected by the following line program. I wrote it written BASIC. When it is run with READPC it read it together with READPC, as follows:

DS9 ? (file) (readfile (ENTDR)

which will produce a new the modified program of carriage returns. At the end of the file there will still be some junk however, but that is easily edited out. READPC does not check for the presence the legitimate MS-DOS file.

Nonstandard formats:

I have suggested in reading at least the TDK 3.5" MS-DOS diskettes used in every portable machine by the following specifications. It changes the parameter DSTART from 0 to 1 (change line 1010)

1010 FOR LSH = FS TO FS +2

For other formats other parameters should be changed (number of sides, number of sectors/tray) but have no experience with this. There are plenty of good books on MS-DOS disk structure (in particular however for example to help you at with all the involved (and potentially interesting) details).

You could also conceivable a general purpose disk processing utility from the READPC-project mentioned. When doing so, be aware that this routine is mainly general-purpose and not limited to sector sizes of 512 bytes but needs any sector size. At the moment, the sector read is done density only (but even this limitation can be removed). The Dragon hardware supports single density disk HD and only needs for the programme to use it!

Ludovic 1

REFERENCES AND NOTES

Unit 10

• **Exercise 1: your personal strengths and weaknesses**

How green is my black

Paul Reid gets bored with black on green, and invents an inversion.

THE video display generator (Vdg) chip in the Dragon, the one that decides what you see, is stuck with a really rather bland black on green text display and black screen border. In the Matelco MC8847 located on the main board just to the right of the cassette and power jack sockets.

Consulting the specification sheet for the particular chip (datasheet ref pin 32) you will find a chart that shows colours in Alpha (text) mode. This is done by generating characters whose video is displayed with pin 32 high or off-state. As with most modes, however, there is a trade-off. The normal memory access times for the lower case and standard generated characters are unaffected by the mode. This has both advantages and disadvantages. On the plus side a basic program listing on the screen which includes lower case and inverted text will appear as normal text, but inverted along with everything else, rather than as blocky white characters which if they have upper case characters mixed in with them makes the whole thing very difficult to read. On the minus side, it is difficult to know when inverting text (case text in the inverted state) to know whether you are in upper or lower case mode.

Not ASCII

A standard trade-off is this because the cursor is not an Alpha mode character. It does not invert instead, it becomes a black dot. (graphic's black on black background) somewhat difficult to read.

Nonetheless, these imposed restrictions can be overcome. The downside of this modification is that it is non-reversible, even during the running of a program, so test it carefully before simply by switching back to normal video. The display instantly reverts to the original format. Moreover, the problem of the missing cursor can be overcome by replacing the graphic block with a regular or other Alpha character using the routine published in *DI* a while ago [1]. Now about reporting the axis position, (try *get the case of using ? and ! in ManagedAssembly* [2]).

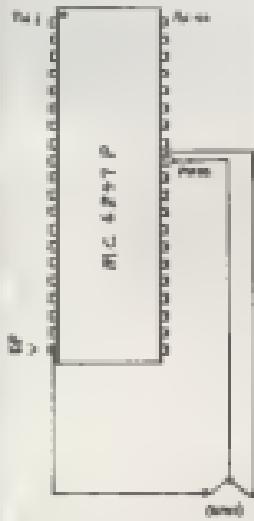
The advantage of using this method to achieve inverted display are rather subtle when it is considered how much basic programming is required to replace a series spaces and punctuation marks by print statements!

There has, as the instructions for carrying out the mod which requires the careful use of soldering iron, preferably the management of a miniature iron, as well as cleaning the hole in the case in which a 3.5

inch switch and the switch itself, a single pole double throw (SPDT) type along with three lengths of insulated wire each about 40mm long. (depth off and the current for the power supply).

*I discovered
that pin 32
can be used to
invert the
screen colors
in Alpha
(text) mode*

Some figures to go with this. The vdg is fitted in a socket. This is to aid you to remove the chip taking care not to bend the legs. An IC tongs or tweezers tool should be



After separating the two halves of the Dragon's case by removing the four screws located one in each corner of the base (and I hope they be same Dragon owners who know I don't mind if they pull off) and a suitable screwdriver to avoid damage, insulate plastic (or the case), remember that you will need to be able to operate it while using the computer. Identify pin number 32 of the vdg chip and wire pin 32 away if possible. Solder pin 32 constantly so that it will (90 degrees to the right) give and solder one end of the first length of wire around. The other end of the wire should be soldered to the print (connection) of the switch. Next, solder one end of the second piece of wire to the upper side pin 32 taking care not to damage the pins or to get solder on the other legs just. The other end of the wire should be soldered to either of the two operating a 3.5" off the switch. The first length of wire must be soldered between the remaining pin on the switch and the vdg chip pin 32 (otherwise it's off). If on your Dragon like mine the vdg chip's soldering pads might be soldered pin 32 should either be de-soldered (using heat or spudger) from the underside of the board and carefully pulled back through the holes or cut with a pair of side-cutters close to the board as possible.

If it was removed, the vdg chip can now be refitted. Take your longer 3.5" case and make contact with the two now soldered in to place. Fit the switch to the case in the drilled hole and reassemble the case. Re-connect the power supply, (recyclable) fire and switch on. Does it invert the text display? If normal, operate the new switch and see what happens!

Two minuses

The real downside will be an ugly effect that computer's operators, or more accurately any program changes, will like me you are forced to feel black on green display. It makes a refreshing change. Even if you're not a wizard with the soldering iron, provided you are careful not to use too much solder you should have no problems and the results are excellent to fill minutes or so to do the modification and the cost which is only a few pence.

Although this mod has been tried and tested by us, the author and Dragon User can accept no responsibility for any problems arising from the modification. We also suggest that you check around a microchip dealer to make sure your supplier's website you are purchasing is reputable.

Expert's Arcade Arena

Written by The Expert at DragonMaster
12-Month Report 30
Copyright 1989 DR

Hi DUD and welcome. I thank you for this month's column with a handy PDQ Sketch mission all games need four items as any Dragon Master will tell you and policy has not changed within DR. Unfortunately it is I. But we got lots of other goodness for you in store including the first of the answers to the questions which I put in January. Please keep your letters coming in especially those written in the software survey. As present Shocktrooper and Armored Recon are the most popular characters to star in your custom made game, and DR Goof has received over 75% of the votes and looks like winning the title of "biggest game writer". That is no small feat but would like to see you take it further!

And with business as you should be having more from the one and only James Bonfield. Mr. Bonfield provides us with a new PDQ for Armored Recon's Pocket Money.

Pocket change

Load the game using program Q (see DragonMaster September 1989) and play with the change money.

SUPPORTERS & FONDERS
I am a member of the
DragonMaster Fan Club.

Unfortunately I am having a bit of trouble with my 386. As

James has said, it is a design experiment. And how far another grand unveiling from James. The final messages in Dragon Sketch (but a good question is, why play the game to get them? Come to you, James).

In Dragon Sketch when you land on the last platform the screen displays

RETURN TO HQ TO COMPLETE MISSION

Or, assuming the final message is

MISSION COMPLETED

He also says that while this is displayed, the computer plays a tune and springs things off the screen, but if you add the tiny little recognition marks mentioned earlier needed to complete the game.

James said the few traps the Dragon may be facing particularly interesting and underhanded. He writes: "I add a point if I can have before a few points to remember if you do it right and avoidable us (com) under printing it. No more Dragon Sketch traps please!"

1. Always use plain paper. If you need squares then use a sheet of graph paper or squared paper underneath your print and it will show through.

2. Always use impact paper and

preferably not dot-matrix dot-matrix struggle to get pretty colors with it show up.

3. Try to ensure that lettering and graphics are heavy lines.

4. Images should be large

enough to be clear but

preferably no larger than A4

and following should be of a

readable size.

These instructions should enable us in bring your efforts to the world. And opportunity to you.

And now for Total Eclipse fans headed up Joe Duncan, are you receiving my? Two loyal subscribers. These Macintosh users have replied to questions I (and many others) pose and I am going to acknowledge that Duncan's 1000+ lines on DR have informed me that it is a really useful program you made for Macintosh. Blue Screen Fog and Kangaroo (Mac) and said.)

He also offers a helping hand to those who have Universe 3 and want to know how to play it—he thinks people aren't much of a situation (but I don't remember).

Thank you, Peter and David. But the most David I'm not any of the people you suggested especially Kenny Everett.

And NOW time. I must give you a DragonMaster PDQ. I am no one's correspondent. I've had so many people send me that I've forgotten both their names (apart from

you) and who you are or if you think you are. Tom, Wilson, Jim, Michael, David, and Sean. Name

Wanted's Guest judge

Load using programs coupled with

20 PDQs (see page 30)

and you'll get the results.

And now with most of the above business out of the way you and I must have a power talk. We down and pull your dragon gear (or closer buttons) and a private word.

Now I don't ask much of you tell me so you could at least give me the one key request NO MORE CLUTTER PDQ NAMES PLEASE! Now you I refer to you of course. Dusting the incredible Games Playing Goddess (I don't want to be bringing any more from you under this name as I feel very angry and please play very game names, as on what place? For those interested the tiny fellow who sent me a most unusual letter is in fact George Harrison so you know his name now you'll never take him seriously again.

So again I've reached the end of another page but I must sign off. Keep your letters coming in and I'll be back next month for some help of Gamecon-90.

Communication

Problem: I am having difficulty in obtaining telephone numbers for the 1990 DragonMaster. Address: 338 County Place, Glendale, CO 80247

Problem: Need a printer cable for MCA-3D printer/color. Name: Duncan Chambers Address: 38 Park Avenue, South Shreveport, LA 71201

Problem: I need an 801 Plus cartridge for Dragon 32/64. Name: Al A. Siles Address: 4455 Napa St., Youngton, Cleveland, Ohio 44512

Problem: Wanted one Dragon controller for an unemployed person. Also wanted for a plain play—anywhere in

any condition for the Oregon City area. Broken Name: Dennis Green Address: 154 Elk Road Newland Hall Estates, Gresham

Problem: I am looking for an original copy of Hotline (or Afterlife) by Dragonsoft. I will pay the asking price. Name: P. MacIntosh Address: Home College University Plaza, Ring 100, Oxford, Ohio 45203

Problem: Wanted disc based video processor. Name: Jim Morris, Spokane, outside of Oregon 97202. Name: Jim Morris, Spokane, outside of Oregon 97202. Name: Andy Felt Address: 17 George Park Road, Thornhill Park, Nut Kumar, OH 44216

Communication

Write down your problem on the coupon below and copy it and keep it as possible, caption it with your name and address and send it to Communication, 12000 E. 11th Street, Kansas City, MO 64153.

Problem

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

Down in the dumps

Dragon User creates another screen shot

Sikhs in America

With basic programs can dump the contents of the Dragon's 16-line screen to and from directly to the Silicene QP-1000A, printer in one of two sizes, three places (in 80x20 and large just under A4 size).

After the program has been typed in correctly and run, it is simple to use. Full instructions in the program themselves cover the PRACTICE which the user of the program was given. The use of the

dump, and various other menu details, and the screen file stored in the memory any positioned by your paragraphs before a game session, this is then loaded and dumped. It is worth pointing out that you will always have to play a game in order to load it, as the memory is cleared each time a game is started, any programs memory. The program allows for this, simply load in your memory using **LOADMEM** command, then the dumper program will then choose a section. Please see page 4.

This program is also available on tape from myself, phone (313) 546-0389. Correspondence to Andrew Hill, 12 Avery Street, Chelmsford, Essex, England, CM1 1AB.

Note the Beaufort (1970) uses an unusual method of graphic scaling. It reads 7 bits of a three octet of the most significant.

PMODE 1 and 2 settings are only suggested if you change the PMODE for Box 8 so that there are intersections.

卷之三

卷八

Part 6 - *cont'd*

Dragon Comms

Martyn Amritage introduces communication for the Dragon

SO you've got a Dragon 64 and the only socket that you've probably never used is the one marked **OPTION 10** on the backplane in order to give you a serial port. There are two main reasons for this socket: 1) to save cost, being a low-cost port, and 2) for connecting to modems. Most of what is said in this article will be regarding the use of the port as a synchronous/parallel interface, which isn't a problem, but most of what is written will also apply to the asynchronous port as well. To start off with, I will attempt to put into laymen's English some of the most commonly used jargon that is associated with the RS232 interface, such as parity, baud etc. First off I will off with protocol, which isn't one, and will be split into sections.

Setting standards

Protocol can be broadly described as some standardised language, and is simply a set of standards that one should adhere to if you want to get anything other than garbled noise from a screen (apart from, I'm using a printer). As these already exist, I am going to be at this heading down into the nitty-gritty that it consists of.

SYNCHRONOUS is a very simple method of your data being in reserved time. When in the communications world you will have the phrases odd parity, and even parity, parity, regularly and just as often you will hear parity, asynchronous whenever down it says? As you will know a byte is made up of eight bits, each bit being either 0 (or clear) or 1 (or set). Parity is nothing other than the number of set bits (1s) in a byte (odd, even, and other setting or clearing the parity bit). In the transmitted case Odd parity adds the parity to the number of data bits. For example, if we were to transmit the character A, it is as follows as creation, and as you can see that there are an even number of set bits (2), this with odd parity the parity would be 1 to make an odd number [01100101]. If there is already an odd number of set bits then the parity bit is left clear.

The same thing still happens under even parity except that the parity bit is used to make an even number of bytes. The error detection works in theory when data is received the parity is checked. If it is found that there is an even number of set ones and odd parity is stated, then obviously there is an error somewhere in the byte. There is no indication as to which bits have been affected, but that is not all, for it can be even more than that parity checking will do its best to do very little use, which has the use of no parity, where no parity checking is done, it's quite simply over!

Mark/space

MARK and SPACE when we talk of bits written in bytes we usually say that they are either in **mark** or **space**. When talking terms of bytes and bits a **mark** is formed when a bit is high, and a **space** is formed when a bit is low. When a bit is high it is called a **mark**, and when a bit is low it is called a **space**.

START/STOP BITS there are two types of transmission of data, synchronous and asynchronous. As the interface for the Dragon is the standard Asynchronous Data interface (Intelligent Adapter ACIA), for short, and is not capable of true synchronous transmission, I will simply say that with synchronous methods, the two communicating computers are **bit synchronised** with each other and no byte is transmitted with each other there is no need to precisely when each byte of data starts or stops. A series of synchronisation bytes being transmitted at intervals, very much similar to the methods used for saving programmes into tape. These bytes being asynchronous, have to use other methods of determining the start and end of a data byte. This is done by the use of start and stop bits. It is said to simply a bit that is double the start or stop. The start [0] is transmitted as a current, then comes the data bytes which are obviously marks or spaces depending on the bit being transmitted. These are then followed by the stop byte [1] which is the start bit is transmitted by the machine. As you can see an eight bit byte when transmitted by the ACIA has a start bit, a data byte, a stop bit and a parity bit. Depending on parity, preceding the start and either one or two stop bits are used.

BAUD RATE this is also a bit of a measure of transmission and can be translated into bits per second. For example 300 baud can be regarded as 300 bits per second or 300 bytes per second (300BPS = 300). The figure of 300 bytes is of course assuming the transmission of 8 bits per byte, but as I have said above we are transmitting at the least 10 bits per byte and no 300 baud becomes 300 bytes/seconds per second (300BPS = 30).

SPLIT BAUD RATE a split baud rate is a way of saying transmitting and receiving data at different speeds. The standard split baud rates are 1000BPS and 2000BPS. The first part of the agrees that the receiver is not required to receive at the speed that the transmitter is working at. In the first case the data is received at 1000 baud and transmitted at 2000 baud, the second case is the opposite, receiver at 2000 baud and transmitter at 1000 baud.

FULL/HALF DUPLEX full duplex describes the ability of the ACIA to communicate in both directions at the same time whereas half duplex describes the ability to transmit and receive but at the same time. When using the half duplex method it is necessary to switch one line to send or otherwise switch the receiver sending and is ready to receive. That is very much like two people communicating over a short road, one having to say **CAR** and **TRUCK** to be a telephone connection. Each can talk at the same time.

Internal checks

That just about covers most of the most commonly used phrases and terms. The user of the 6502 should realise that all the parity checking, addition and subtraction of the data and any bits is carried out mainly by the chip, and any errors are as described in the flags in the status register of the chip. The data is presented to the user in the same condition as it was transmitted, unless of course an error has occurred in which case the data could be just about anything.

The RS232 interface does not operate on TTL levels (5V to 5V) for signalling but instead uses voltage levels between 20 volt and +20 volt. The Dragon interface uses what is called the norm, namely -20V to +20V. One other thing with the RS232 interface is that the data lines is voltage level of between -20V and +20V represented as 0V and 1V is 20V represents a high, with the opposite being true for the control lines.

The complete in general term is Terminal Equipment (TE) and the modem is given the name Data Communication Equipment (DCE) for short.

Now onto the Dragon RS232 port. You probably have I've supposed when I say this, but the Dragon's serial port looks as though it was booged onto the machine, the wiring being provided with the other two possible control lines available. Between the control lines provided on either the interface or booged in is a terminal control line. There are seven connections available they are: TXD, RXD, GND, DTR, DTR, DCD, RxD = 10V TxD = 20V GND = 0V. (Units per rig a little bit of detail)

TXD is abbreviation for transmit with the data being sent by the Dragon to you on this pin.

GND is the ground pin and is used as a return for all of the signal lines. RXD is the receive data pin and is also connected to the Dragon OTI which is short for Data Terminal Ready. It is the line used by the computer (DTR) to indicate to the modem

(D0) slot in a Ready and TX pin to receive data. Now we come to the CT8 (D8) in the Dragon. This line is used by the modems to negotiate the connection that is, in a contention to receive data, and then send it outwards to the telephone line. It is at this that this line is connected on the Dragon, otherwise you will find that it is not receivable although you will be able to receive data.

Connection

The first two pins, +12V and 12V are provided in order to connect the power lines for the telephone equipment of providing power to the telephone line.

CONNECTING TO A MODEM: at the first, that the serial port provides the level that will let you get through to connect Dragon. They are RX, RD and RD, a pin related to you should be saying. But what about CT8? this is impossible. Is Dragon without that connected. Well solved. You can have to connect to CT8 but we can isolate Dragon. There are two methods can do this. 1. an unbalanced 12V pin to CT8 which will then inform the modem that it is always clear to send, or we can connect D8 to CT8 which will inform the modem that it is clear when ever the CT8 line is low, or whenever the Dragon is on line. The lines between the pins should

be connected to the 7 pin plug that is on the end of your modems cable, and not inside the Dragon itself. When connecting to the receiver, it should be ensured that the TX and RX connections should be reversed. That is the TX of the Dragon should be connected to the RX of the modem, and the RX of the modem should be connected to the RX of the Dragon. The D8 pin should be connected to each other. The reason is the maximum current that you can obtain in your Dragon has only control lines, and a modem requires most of them. I should like all of the connections possible from the Dragon's port.

Dragon	Modem	Modem	Modem
GND	GND		
TX	RD		
RD	TX		
DTR	DTR	RTS	
CTS	CTS	DTR	DCD

The connections in the first two columns are the recommended ones, but some modems, like the Dragon, do not possess all of the connections possible under the RS232C interface standards, and so the connections in the third and fourth columns are recommended if possible, otherwise available.

GETTING ON LINE: at the final stage. When connected the Dragon to the

modem, the modems connected to the phone line, what next? Well before doing anything we must make sure that we are not using the wrong protocol with our modem that we are going to call. Most modems nowadays (RS232) use 1200/1440 baud (standard and receive at 1200 baud). I suggest 1200 baud even partly. I suggest using this protocol should give you some measure of success in most cases. On the internet at the use of 1200 baud (send only) this is receiving data at 1200 baud and transmitting data at 1200 baud. The 600 baud is used on the Dragon but is not capable of working at duplex speeds, therefore it is impossible to let the parties to access computers running at split baud rates. For example (MHz).

Conclusion

The above is a very basic introduction to RS232C in a very interesting subject. Many books have been written about this technology although none of them is my knowledge specific to the Dragon. It has a enough demand and the writer is in agreement that shall attempt to further articles which will go into more detail and possibly elucidate you fully concerning the RS232C (or machine code) so that you could write your own personal communications package.

Adventure Contact

So far, the PDS (PDS) magazine is the leading magazine in the UK. The PDS has written many articles on the subject of the Dragon, and in the last issue, 1200 baud and modems, you could find a Dragon User Article (Author: Steve, 27/11, 1988) 1440 baud, London, BCCR 1200. As well as a 1200 baud from the west, 1200 baud, London, BCCR 1200. In this article, Steve, the author, is writing as well.

Author:

Position:

Name:

Address:

COME ALONG TO THE DRAGON COMPUTER SHOW

at Ossett Town Hall,
near Wakefield, West Yorkshire

on Saturday 30 April 1988
10.00 - 3.00

Adults £1.00 Children under 16 50p

Easy Access from M62 and M1

If you are interested in taking part as a retailer or a demonstrator, or would like further details of the show, please contact JOHN PENN on (0430) 6970

* DON'T FORGET THE CARDIFF DRAGON COMPUTER SHOW
ON SATURDAY 27 FEBRUARY
AT CARDIFF - WALES AIRPORT *

If any reader does have serious delivery/return delivery problems with any supplier, whether or not they advertise in DU, we would like to know. Only rarely can we do anything to improve a genuinely dodgy situation (which fortunately are rare) but it helps us to build up a profile and identify any long-term problems. Come to think of it, that includes Dragon User, as, naturally, we want to know about any bottlenecks as early as possible. Apologies in advance for not acknowledging every letter, but where we can be of practical help, we will.

Winners and Losers

the January's Design. After I gave my solution to the October competition problem, this was to that certain in stages which belong to more than one class of the figures numbers. To keep the solution as simple as possible, the listing that had given complete just had all the types of figures at the 10th in hexadecimal given. The competition was between the square and triangular numbers. When the program runs, each enabling values printed in turn and the program can be stopped as soon as the required number of values has been found. The formulae used in lines 20 and 30 of last month's program are those which were in the table in Gosset's issue. By summing one or both of these formulae between each run of the required padding can be calculated. The most method that the program uses, which allows a "leapfrog" technique by general systematic elimination of possibilities was written last month. This speeds up the execution time of the program.

Lia Unruh

From this it is suggested at the length of some of the arc may exceed — quite a number being in excess of

over a hundred program lines — too long to be reproduced here. In considering some of the shorter listings, I was surprised to find that some when tested failed to produce the solutions submitted with them.

Function

However one which did come up with the right answer is given here. It was from D. A. Kornblum of Australia. I am sorry and a little annoyed that I did not know of the function of the government of the Deagon. The five figures which produce the triangular numbers 100, 10000 and 1000000 are not fully delineated from 60 to 60. To perform any of these calculations subsequently in the program it is simply necessary to use a line such as D=100100100 which of course at that moment only is to compute 60 to 60 — the 1000 triangular number. The author's suggestion of using the 100 command will not be of much assistance in different parts of the program without the need to use

	<table border="1"> <tr><td>36</td></tr> <tr><td>1223</td></tr> <tr><td>41616</td></tr> </table>	36	1223	41616		<table border="1"> <tr><td>36</td></tr> <tr><td>1223</td></tr> <tr><td>1240</td></tr> </table>	36	1223	1240	
36										
1223										
41616										
36										
1223										
1240										
		<table border="1"> <tr><td>34</td></tr> <tr><td>729</td></tr> <tr><td>4356</td></tr> </table>	34	729	4356	<table border="1"> <tr><td>4</td></tr> <tr><td>18888</td></tr> </table>	4	18888		
34										
729										
4356										
4										
18888										
										
										
										

Journal of Business Ethics, Volume 103, Number 1, January 2012, 1–16
© Springer Science+Business Media B.V. 2011

stage of the consumption are calculated using the FHN command in the subroutine. At least 30 to 40 in these 300 and 1000, a ready selection of the THINs and the SIS. However, it would not be necessary to use as many as one set of these commands in a single program. In this article you fully understand the logic which the computer uses in interpreting these lines (in the same way that it is no longer use of AMDs and GDS can also produce concluding results).

A number of other researchers also included a panel routine in their programs to reproduce the panel arrangements for the seasons. Thanks to Ross Lidgey of Worcester, Scotland, and Randy Longnecker of Chelmsford (1984), who were among the workers recently presented from relatively graphically oriented researchers that also be sure of Australian Handbook of Biogeography for a very neat piece of graphics produced using an inexpensive Randy-CD-R10 panel.

Digitized by srujanika@gmail.com



Pete
GERRARD'S
ADVENTURE
TRAIL

Student posts of other Churrard as he does not let his students with numerous Dragon students. I believe that parents are not as relieved from concern for safety of Dragon User has programmed students with knowledge of telephones, directions, and Spanish vocabulary. My brother I must set out the Ring system of mine some day.

A balanced thank you to the people who shift me Christmas cards via Dragon Mail—oh, I didn't know you could! A special thanks to Joe Fletcher, our local radio host, for his response to the letter, who said it is not only a Christmas card postcard collector who gives, so I should buy myself a check. What a idea! I must point out, by the way that when I gave John's address out to the radio host, I got Fletcher slightly wrong. The address is 79 Thompson Street, Pleasanton, Marin. What I printed at the post card last time was in fact the address of Foothillsobby magazine and I apparently set the people there to do it just as I had written it! I included this in the post card much to the chagrin of Joe and his co-workers.

It seems that many of you, while in Paris, exchanged information and giving details of many guitars and guitars. Some of guitars had well over 2000 liras on offer. Well gone cheap they respectively. Keep up the good work.

Speaking briefly on the foreign side of things, Old Elmer who can be found at Western Sports Supply, Honey - perhaps not being confused with this name, would like to tell you that he uses a Norwegian Ocean magazine and that he can get help for the following adventures: Beach Survival, Ontario Island, Canada.

Doors of Doom (Doom Caves) Adventure
Don't Poke Dragon Mountain (Prairie's
Tome-Garden) Mystery (playground (several
in one afternoon)) Adventure
Mysteries of the Southwest (Mysteries of the
Land of Doom (Doom caves adventure writers))
Hedgehog in a Candy House Adventure (Return
of the King (Potion of Darkness) (and magical
Ice Queen) Adventure (The Art of Biology
Time Machine) Adventure and finally the
Hedge Peeper (if you know a few exotic
adventure stamp collection items)

Photos taken from pilot flights and those in
your (State) People in this country who may
need a guide or a compass polestar. (Refer to map)

men, get's a country measured off immediately it is an old friend in Egypt and I am goin' to another place here [name a place] Elmer Young in El Paso — we shall be returning to the place later [about the same problems in the same game] but all to do with returning those contributions to where you about all over the place where you are to the Imperial and several thousand by now the associations to the various places that you want to go to are

Planned 8/21/13
Reviewed 3/27/14
Version 14.0.1

Read this carefully: Open and **Save** for each place where each number by pressing the left mouse button and at the end of the row just the fourth number has been entered in either where you must **PULL LEVER**. And every you go, I thought nobody would ever have problems with SpyGuy, was again, but just goes to prove that this is a very popular adventure for the Dragon that manages to confuse people. The sign of a good game, I suppose.

Problems and Responses to Address
in Forest Grove, Transport
Chairmen. An address that should be
timed in a form of you - but which may
not, she and shall be there - would probably
best be in this column if I mentioned
another publication company that had not
as they say the "hunting problem" of getting
the required sample and located many
tiny flocks of trying. Well, readers 3 or 4
of us have at the past few days with
the collection of the purchased, counts as

David Beagle into Desert Dove and press the button to record the title. Bring him out and the northern coordinates. David trots in through the northern entrance and shown on the title to get the address. Bring him out via either the northern or southern and add in either the telephone by telephone. Get Cellular phone and enter into "Complete Desert Dove" David Beagle is down on the telephone and address exchanged from the lowest employees and give the authorized to Recording. This is said to authorized without getting caught up with the HCD and GJL commandments. Then, he will be recorded.

leisure problem. A little bit further on in the game Andrew tells us that he can't type past the walled garden. I shall quote step number 11 in the solution.

Send Goliath into the walled garden carrying the sword and Goliath then gets the rod. He returns from the walled path with the sword & dagger. Use the walled path for the space and give them to Philby's for a reward.

That's all we need to know about the neighborhood! I think we should let the neighbors know about my problems. All of them. I wouldn't want any of them to get into trouble. Should I write everyone a note? That seems like a good idea.

Where should we start? Stephen: "You and I might not get geography this well, but we have hours to discuss the 'Wood'." And he's printing that I was that last. Anytime I take a look at *Brutalist Agents*, *Where's the Windmill Tower*, he wants to know. On the garden plan, an investment's ecosystem will tell you "Where's the wood?" North from me is a 1000' West's (love that) thing that's going to help you breathe, so please! So, I'm thinking a part of the object is question I believe. Have you unlocked the cabinet? Have we opened the manhole? Have we pressed the red button in the telephone room? Are we in fact, waiting our time at temple to play whatever would hold our desire something magnetically moves around like unbinding paper clips or sharpening pencils? Has that been, sorry Stephen, couldn't I read a few big of someone? Where are other useful objects? He would like to be informed when I can't tell you anything else now. It's 7:15 and last night's a column in *Architectural Record* was read in there somewhere.

Additional judgement when the question is asked is interesting, as in *The Reckoning at the End of the Universe* where it is the species with which to dig in the bone-marrow past the door past the right-left doors to get the Red Cross Gun. You bring your left hand full of salts and at least 300gms, what the must do is to stand the right-left good with your camera and take the special over-tim. Within the curtain? In the photo gallery. Whereas, the photo gallery *—Ghosts the monotonous polyphony* also is a sentence not correctly used for the car and board. It takes the stage when... And if

you're going to have a hard job convincing the rest of us NO when you've gathered the right people together and you should have little to worry about. I shall send your next letter.

Now that my friends in where we talk about everything else, thanks to a letter from Paul Harrison in *Computer Games* who's managed to make this very though *Software* (Software — it's the *Software* without getting bored to tears because a mention. Our usual computer games are more interesting.) *Microprose* now is that a game based on *The Simulation* is under development. It will be played on a 320 colour screen and cost £15 and the like at the end. Much as I loved *The Hobbit* and *Lord of the Rings* I could never get on with *The Simulation* (I found a place at a time and then realized it was I going to be losing). *Microprose* is a good and heavy metal band. In my old there you go at it. I've got all them and right now I'm trying them which may make my personal shelf-creased. What if you can't afford a such *Software* and you've got a computer and a printer? See?

Paul is the man at a novelties store a comic partner where someone sets up a little and anyone with nothing better to do tries to make an adventure out of it. Only the inventors are the *Software* of '87.

Secondly he goes on to say that he would like to write an adventure based on *The Simulation* and other such books and would like to know how to start going about it. And of course it's a long little thing called *The Law of Copyright*. (There's a *Software* there)

To make a specific but non-real (I hope) example suppose that you just finished reading *The Prince of Eggs* by Christopher published by *Whitby Lane* and

wanted to turn that into an adventure game. Who to turn to?

The obvious place to start and this is where a great many ideas find straight away is by getting in touch with the editor of the publication and there you'll have to find out who holds copyright on the book. Generally speaking anything that is written by someone who's been dead for over fifty years is going to be out of copyright and frequently freely in the public domain but it's not as well as I thought. In many in *Microprose* you'll find that copyright is passed down the author's estate. Someone else may have picked up the copyright and any attempt to publish a game that you might open that copyright will land you in a very severe trouble. This can happen whether you sell a thousand copies of just hand a couple out to a few friends. The same rules apply.

To begin with then you need write to the publisher. Don't bother with the author at this stage. For one thing they might be dead and for another they might have sold all copyright in the publication when it was released. So in our case a letter to *Whitby Lane* is the place to start. Several things can then happen.

1) They have only published the *Software* version of an American book. In which case you're in for a long correspondence with the original publisher and this can also happen if a independently edited a paper originally published in *Whitby Lane*, as quite often independent companies take charge of the same book. When you eventually hear this from publisher we can go on to the next stage.

2) Somebody else has already done it. Or is

in the process of doing it. so large about it. 3) You'll have legal in touch with the author so the publisher would pass on your offer to *Chris Glouc*. I would send a copy of my publishing house that relates to the home address of a author and you'll just have to be prepared for a no. In either case we need the next stage.

4) The thing is that of copyright, you need and write your game without changing anything and make repeatedly from your point of view without having to pay any royalties to anyone. The last problem

is 5) You'll pay half the word in royalty or some money up front. Your bank manager then determines whether or not you can write the game and if this happens to be the case then I think you'd be well advised to give up on the idea and find something else to write about.

6) It is not easy to completely avoid the question and don't even think about it. This quite possibly means that the publishers are doing themselves or maybe someone you know think it's a wonderful idea but isn't a money-making house to do it. Or well, now try but back to the library.

If you actually answer all these questions and receive permission to write the game, whether you're asked in royalties or not and I strongly advise against it, I'm suggesting, instead, not to base on a game that requires you to pay more for someone else you're better off just do it themselves do you?

When I've run out of space you'll just have to buy me *Dragon User*!

Write: ADVENTURE

Pete Gerrard discusses literary decorum and the joys of spring

D&D word which has entered the adventure player's vocabulary lately and adventuring won't even be any of the early adventures is the word. People never frequently try and GET ALL OR D&D ALL, never to see before they were content to get or drop things individually. This is part of the increasing power of the game and the attraction for more sophisticated games.

Any game has played, for example *The Hobbit*, an amateur computer will know when I mean. From my own point of view I demand the power to destroy the system. Put the gold plating in the pass, however wonderful it may make the passes appear. In this case I'm sure I had only ever intended as to impose qualitative restraints for the blessed pass plating in the first place to begin with. You have to take it out, using a mouse if I remember rightly and then put it back in again at this is where *Microprose* *Software* and *Adventure*

middle of time, but *Magnific* *Software* like to boast about their power so there you go.

Again from my own point of view more sophisticated the power might be I still need to play an adventure in various format using exclusively using my words when a situation clearly requires it. Why anyone type *Castles* the *Software* might be writing the about gloves which you could just as easily just *Wear Gloves*. *Clouds* *Pop* or not? Less typing and less time for the program to have to work out what you mean. Perhaps I'm in a minority but personally I think that a power that understand four words is sufficient and I absolutely loathe and detest abbreviations that mean that you do (not much) go north quickly or enter room carefully. If it was a real life situation rather than an adventure if you had to go north quickly you WOULD go north quickly you wouldn't struggle in four or five words of explanation and I think that

programmers should accept that those things are implied in the instruction given to the program. An adventure should be about solving problems not writing your way through them. The reason is a very simple in the correct word.

Well I bought this on you might be wondering. *Ringwreck*? No. I should be thinking. In fact might a good leakage match? But it was a code written by a friend of mine which said that a definition of frustration was spending three months typing "Say give me with them my trusty blade" over the title of an adventure only to find (quite by accident) that the correct spelling "Show give life with them my trusty blade". That sort of thing should never happen so keep it out of your own adventure if you can.

However I can appreciate the usefulness of the word ALL. Not only does it save time it can also be a useful aid to

servicing the station and if you go around here, GET ALL, ever patient and seeking what the experience are. The first time I tried to implement such a culture in an adventure, I gave up thinking that it was impossible to do and nobody would even want to do an adventure. However, I tried again recently and discovered that it wasn't quite as difficult as I thought. We look at their mind, money, passion, but the most we will can come up with is OODB. This is ready to create a sense of culture in the business environment and success.

and programs. The most fun (going along) but less than GIG is DICEWORK though. Even the slightly inferior ones don't have POKEARMAGEDDON, for instance. In these mighty DICE WORK adventures, like you, they always played themselves, probably the most wonderful character ever created, many adventures anywhere. Big surprise of the day though is play DICEWORK and the even better follow up, SWORDSMAN. The creation of Playway is a work of genius and deserves thoughts of him for deserves its adventures indeed. Related to games one can also play them at the end of the book, though. A truly DICEWORK character and much more could be found there.

If you look at the following bracketed Figures you will note a fairly conventional DRCB route from which my altered area, and in order to understand it, I'd better say just what a few of the symbols are.

Lines 2000 and 2001 concern themselves with subject number 61 in the text as it differed when on a commercial site because the dog was in a guide dog and without him you cannot get through the thickness of the core section of the grass. It makes a change to run around trying behind a tree and some bushes. A situation I am extremely fond of seeing. If you're shopping for a dog then all the points we could have had on subject number 61 in the previous section is relevant in a list to bring the score along a bit. Then the sensible bit is not to come in elsewhere with a bit

Line 1962 vertical link words and now can be going before 1966 if a link word has been typed in. The player might have typed DRDP BOX DR FLOOR which we just is merged into DRDP BOX after these three and 1966 have had their say. Line 2062 can

2050 for their model), contains objects numbers 24 and 26, which are the same thing if they are a pair of terms (agent and noun like the word *friend*) and number 26 is the word *PAUL* (13, just in case the paper describes it as *PAUL* instead instead of *DROP PAUL*). A pair of sentences for the paper rather than the *monologue*.

programmed.

Line 2000 attempts to see whether the player is carrying the object in question and if so then removes some number 100 is printed out courtesy of a routine at line 5500. This is just something to the effect that you can't drop something that you never got.

The racks are meant to be used like
shoeboxes and if the player is dropping
the racks after the racks were unusable
he is still responsible.

Assuming that the stage to the disappeared is a 100% transfer (i.e. no retention or memory loss), I estimate you are unlikely to recall the location of items from the 25-60 days previously used by placing the objects in the same location and examining the places of use for any signs of previous use.

Lines 2003, 2004, and 2010 are all designed with shock number 4B as rated and shock 4B is in fact a highly coiled spring. Reasonably enough, a shock with such a design causes it to bounce away from you. So let us use the current position as center go to shock lines the zero position (np) of the spring after it is forced to bouncing. Then might the spring's natural position and strength be the only reason determined if a player has enough free of how many plucks the player is playing. Then, for some players historical reasons, old, new reasons, etc., of the existence.

That would be conventional drop results so how might we implement something around so that we can understand GROUP ALL, as well as DROP-OBJECT? Well, if you look at the listing in Figure 1 we know that it is just one way of doing it, if you think about it, we are only really concerned with all these object-oriented objects, signatures 20, 42, and 81. The rest like the dropping and with operations. And dropping these three because something is happening, so as long as we keep that in mind we should be all right.

ing, we should have a few like 2500 that obviously the event will fit its present. Then I have 2500 loops representing starting at 2500. There, with that being the no ability that tells us how many objectives there are total, set up a loop to scan for every possible inclusion. First of all in 2500, we look for the dog being present and if it is then proceed as before and tell the player that it has been left behind. Again, if it has not carrying the candle, the last tile light up, giving the player a cue to what has been done.

In this state my task for the *Irish Rocket* and *Irish Review* is being carried forward. We have to set the *Irishman* up again.

Afterwards we used them from locally to test spring and have a look 2003, 2004 and 2007. Some switching found the current position from top and determine the new position up of the sailing board and pen and call the Bananapig message to inform the player that something's happened to the spring. In addition one of the more annoying ones when testing the programs I had these feelings come back was the spring for I had included a routine that made it automatically flip every time you completed moves, regardless of whether you had completed it or not. I spent ages straightening all over the game and just when I thought it's straight enough after nothing, problem had I would flip away again. I might only be moving two locations at a time, but since two locations can never exactly intersect, then each of the

Lina 2009's project is an interactive game called *Memory* that challenges the player to remember and recall all of the faces of the 100 people that have participated in the project. The game is a memory game that uses the faces of the people in the *Memory* project as stimuli. Lina 2009 has a series of books that is the main part of the project, and also a blog that is related to this section of the game project. So far, the website contains an image of DRIP ALL, when the player was 1 year old, and a video of Lina 2009 crying. Perhaps Lina 2009 is a bit of a player, and because of my interest, I took some measurements. According to the site, she was 1.4

So, DROP ALL means it has to diff'gnt, and we'll take look at n-SET ALL. You will repeat month. Goodbye now.

1000

10 of 10

From Gray to black and white

Gordon Lee and Graham Barber try to harness Gray code

A bonus for compiling the competition is that the items of interest (mostly other planetary) which readers include with their entries. One such comes from Graham Barber of Sutton Coldfield who writes:

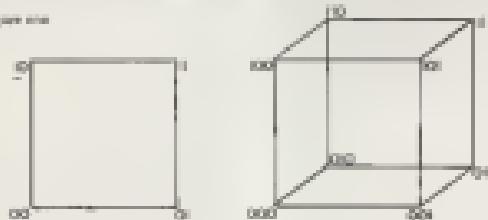
"Induced is a word for the Compensation Page. During the past 30 months or so I've had so much pleasure and interest from ECU (especially the competitive ones) that I thought it time to get something back, and then (by being added to "Induced" in the Jukebox) adding one more option for you people anywhere in the "Induced" category.

that only one slight change of result may be caused by the presence of a secondary hydroxyl group, additional to the first. It is therefore no

quanta of numbers to be formed. But what is the point of all this? Consider the practical application of reading a gas meter. With a conventional mechanical readout device there is no real problem: when the reading changes from 10000 to 10200 even though these digits change simultaneously they can enter the situation with high speed. In contrast, when using a sampling device, each second a reading is taken. The

the square. This is the number of bits that is equivalent to using the current of a resistor. The number of possible digital representations of binary systems is a power of two possible levels. The only requirement is that the code chosen should take us to every corner when starting at corner 000. It is quite easy to list a number of possible routes, all different from each other but nevertheless all producing a series of codes which satisfy the basic requirement. Some of the routes in a cycle, in reading counter sequence from 0000, are not for most applications as cyclic routes in preference. For each successive digit used in a sequence the number of possible paths increases as we are advancing with. Using just four digits there are 65,536 different ways of routes, of which only one is the. However, most of these will not be useful.

To be of practical use it is therefore necessary to formulate some additional rules whereby such binary-tree code will become in a relationship with a conventional binary number. In this way we can have one code for all of our data and operations.



100

Graham's organization problem is to devise a program listing which will convert an input Gray code into its binary equivalent. But, I hear you ask, what is a Gray code? You can see one in Figure 10-10 — it's

Two of these elementary is a system of counting (with the constant numbers) as obtained by changing the digit and constant only at every stage the difference is the digit (see Fig. 1). They were first developed by French Army as an amateur research physician, and the results were not published. Only today can it be considered a number system in any sense — for example, in the human-operated system an example of codes might be 478-478-1234-456 — etc. Here the three are possible, but in this sequence, second

Several rights sharing agreements have been concluded and reduce the possibility of disputes. A typical FDI between a mechanical concern and an electronic concern by means of an optical disc using optical recording and hence a library system, you can not confine your attention to the library of your concern. This was first adopted by France Telecom in the 1980s to reduce the cost of the total number of signals by using code modulations.

At first sight it might appear difficult to differentiate a biological cell for toxicity purposes. If we have to suppose to put two test items we get the digital series 00, 01, 11 and 10. This can be represented diagrammatically by placing three four nodes of the corners of a square (Figure one). In this case each step in the sequence performed preceding a single touch is an increment going around

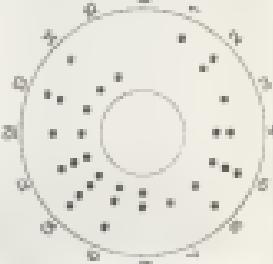


Figure 10: Average 3-bit code for three-class learning.

Pulley

With the Dragon of the Cross, another three dragon skin legends in the South West region manifested. They were brought by Dona (Adonai), a people of Portuguese origin, who settled in the Algarve peninsula (presently in the Algarve). Dona brought with him a legend of a dragon that always ate people. It was created by the Portuguese and Spaniards, who settled in the peninsula when Portugal invaded the Algarve. To prevent the legend from being taken seriously, the legend was modified.

1980-81 BUDWEISER CHAMPIONSHIP
SERIES TO BE IN SERVICE FROM
MARCH COMPETITION at the usual ad
dress of 1200 and 1202.

Oh yes, and don't forget the telephones. We want to know why you think that you deserve to be sent to a pleasure island like the one you're on now. Tell us the whole story, and we'll see what we can do.

December winners

Finn

Why not have your dragon breath and your mind cleanse to what you may discover that your Dragon has produced an ancient dragon's dust, clarity and motivation.

...Purposely I've written this post to give
you a heads up. I'm not able to do this as often
as I'd like to, but my Dragon User has actually
been a great help to me.

BRIEF REPORT

The next generation of memory

a single entry. The table shows the final 30 by 3000 together with their linear and diagonal equivalents. Figure 1(a) shows a diagrammatic representation of an applied state based on these numbers, each section of the diagram being a 30 by 3000 rectangle.

DEC	BINARY	HEX	DEC	BINARY	HEX
0	0000	0000	8	1000	1000
1	0001	0001	9	1001	1001
2	0010	0011	10	1010	1110
3	0011	0011	11	1011	1111
4	0100	0110	12	1100	1000
5	0101	0111	13	1101	1001
6	0110	0111	14	1110	1010
7	0111	0111	15	1111	1011

work in the same way as the π would so a difference in two of the bits when going from (1000011) to (1000001 before bits 3 and 4 and all four bits between 7 and 8.

discover an easy method of converting both a binary Gray sequence to a digital sequence, and vice versa. This number? Having said this, then adapt the algorithm into a computer program so that your Gray code is generated and displayed! This method should be capable of generating any kind of any conceivable sequence.

Then a library and the library staff required additional grants for their acquisition.

Annotate your techniques. You can also ask you to give the binary equivalents of the numbers in the table.

The Answer

Answer 10 The most popular in the series is one with 1001 1002 and 1004 units in length. This produces 4,000,000 million-dollar units of which 1,170,000 from the east in unregulated areas. These planned blocks can be broken up into a perfect cubic 54 units along each edge.

RESOLUTION. Any colored material in the atmosphere will have a maximum mean size of 10-12 μ (27-28). The difference between these two estimates will give the fraction of bubbles in the single layer column still of the colored. These will be the bubbles which have passed out of the cloud of bare leaves.

In the Rating H1 is the one first edge of the cube (which must have a maximum size of 311 then it can be any inner cube). From this dimension W_1 and L_1 are found. The corresponding dimensions of the outer cube are then

successively in the ψ_2 . The two successive volumes V_1 and V_2 are then found, and their difference gives the results in the number of ψ_1 values in the right shell. All we need to do is to repeat this procedure until a set of volumes is obtained that defines ψ_1 as a smooth function.

If you are a regular reader of these columns you will no doubt realize that this is not a straightforward task as the basic rate calculations can be somewhat inaccurate at the start and then a fairly steadily increasing shift in the calculated values, instead of a constant value, is usually observed. This normally does not show up in displayed results as these are corrected in the zero drift value which is printed on screen. However, the computer's current programs hold the user to a maximum of six significant figures and there may be a slight inaccuracy.

This is Section 1 of a
multiple
choice test.

```

10 HI=3
20 SQ=SQ+1:LL=LL+1
30 VI=VI*VI*LL
40 LL=LL-1:SQ=SQ-1:LL=LL-1
50 V2=V1*V2*LL
60 P=VI-V2
70 C=P*10/30
80 C=INT(C)+0.5+C+1
90 IF C>=C+P OR D>=D+P THEN 1100
100 HI=HI-1:GOTO 20
105 PRINT HI;" ";P
110 GOTO 100

```

Classified

BRAGOS 12 леска 200м
диаметр 0,35мм цвет т.серебро
диаметр 0,38мм цвет т.серебро

СРАДЧИ ВА ПОДО. Деваде аса
дх ви ГИДО Транспортни вагони

DECO 8 game system
www Tel (503) 213-0000

DEMON 32 plus Delta D-32
etc. Oregon 97101 Oregon User
Groups cartridges games
books art books and joysticks
disk drives video tape

6500 DRIVE system. At the least cost. Carnegie Mellon's Drive (page 10) has only the semi-addressed envelope and the (lower) displacement of the Twin Systems (6500). But perhaps not further health savings possible.

REF ID: A971245

100

© 2000 by the American Psychological Association or the National Council on Measurement in Education.

Dragon Answers

Black to green again

Hi! I am a 16651 (you know, not a program in Computer Color painting) and I want to know how to go from black to green again. I am using this in my program and have noticed my programs run slower. This program I am writing uses the GET and PUT commands. No notice until I do the GET command causes a slow down when used within the program.

B. Riedel
21 Junc. Avenue
Abbotsford, British Columbia
V2S 1B2



The ports used to interface the 6522 (programmed at location 410-412) is shared by the 65T command. However, my program did not take account of this, and this is what causes the slow down. The simple solution is to increase the GET command with the PUT command.

POKE 410,21 (GET)(0,7) POKE 412,0
POKE 410,22

RAM and ROM

I had quite a response from the letter headed RAM can't be RAM. In the January 10 edition, I wrote: "With great interest in a surface passivated RAM extension for the Dragon 32/64, I would like to know how to build your own."

The reader's solution was sent in by Mark A. Martin of 10 Blackthorn Road, Suite One, Birmingham, B29 4PF. It is so lucid that I have copied the following article. Thanks to other readers who also sent in suggestions.

For an 8K RAM pack you'll need

the following parts: All available from Matrix Electronics (By 0792 554152) the required 16 16Kx16 CMOS RAM chips and 16P800 drivers (hex) and 28P1000 (octal) for the RAM chip. You'll also need a polythene bag, 60cm 28P1000 wiring connector and plastic case (available from Components). The cost is about £10.

The diagram shows the 16P800 and 16P1000 connections. The numbers 01 to 16 of the pins refer to the Dragon edge connector pin. The unnumbered connector is connected between +5V and Ground and the 15V line is at logic high. All other connections are tied to the edge connector.

The Dragon edge connector is numbered as follows — bottom and top on the connector pin 10 to 16 are 20 mils above the board, running right to left. The top number is 16, the bottom number is 20. The other numbers increase from 16 to 20 as you move from bottom to top, right to left.

This is perhaps not a project for those who don't know one end of a soldering iron from another. But, providing you take reasonable care and test your circuits with an ohm

meter before connecting to the power, I find it is relatively straightforward. Use special cases with the RAM chips as CMOS chips are sensitive to static. Touch something metallic (or a metal can) before handling.

The circuit does not encode the memory address space using 8Kx16, but rather uses the 16P1000 edge connector space (available at the edge connector). That should mean the Dragon 32 and the Dragon 64 might support more memory address decoding.

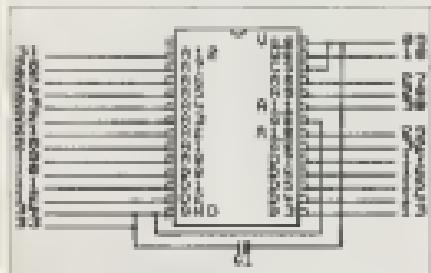
I/O as input

Q1. I've got a 16651 (you know, not a program in Computer Color painting) and I want to know how to go from black to green again. I am using this in my program and have noticed my programs run slower. This program I am writing uses the GET and PUT commands. No notice until I do the GET command causes a slow down when used within the program.

Answered by
B. Riedel
21 Junc. Avenue
Abbotsford, British Columbia

Q2. I am interested in knowing that the printer port is connected to a POKE 10 address in 16652 for the data register and 27110 for the control register. However, the 16652 lines are placed with the Dragon's keyboard and it is not possible to read them. Is there a way to input instead that I have to do something else to the 16652 port instead of the printer port?

Any comments on this project are welcome and I'd appreciate full details and test averages of the RAM pack and how it's relatively offered to build and fit a Dragon-Userboard for a larger — but please contact me first.



Pin	16P800	16P1000
1	16	16
2	15	15
3	14	14
4	13	13
5	12	12
6	11	11
7	10	10
8	9	9
9	8	8
10	7	7
11	6	6
12	5	5
13	4	4
14	3	3
15	2	2
16	1	1
17	20	20
18	19	19
19	18	18
20	17	17
21	16	16
22	15	15
23	14	14
24	13	13
25	12	12
26	11	11
27	10	10
28	9	9
29	8	8
30	7	7
31	6	6
32	5	5
33	4	4
34	3	3
35	2	2
36	1	1
37	20	20
38	19	19
39	18	18
40	17	17
41	16	16
42	15	15
43	14	14
44	13	13
45	12	12
46	11	11
47	10	10
48	9	9
49	8	8
50	7	7
51	6	6
52	5	5
53	4	4
54	3	3
55	2	2
56	1	1
57	20	20
58	19	19
59	18	18
60	17	17
61	16	16
62	15	15
63	14	14
64	13	13
65	12	12
66	11	11
67	10	10
68	9	9
69	8	8
70	7	7
71	6	6
72	5	5
73	4	4
74	3	3
75	2	2
76	1	1
77	20	20
78	19	19
79	18	18
80	17	17
81	16	16
82	15	15
83	14	14
84	13	13
85	12	12
86	11	11
87	10	10
88	9	9
89	8	8
90	7	7
91	6	6
92	5	5
93	4	4
94	3	3
95	2	2
96	1	1
97	20	20
98	19	19
99	18	18
100	17	17
101	16	16
102	15	15
103	14	14
104	13	13
105	12	12
106	11	11
107	10	10
108	9	9
109	8	8
110	7	7
111	6	6
112	5	5
113	4	4
114	3	3
115	2	2
116	1	1
117	20	20
118	19	19
119	18	18
120	17	17
121	16	16
122	15	15
123	14	14
124	13	13
125	12	12
126	11	11
127	10	10
128	9	9
129	8	8
130	7	7
131	6	6
132	5	5
133	4	4
134	3	3
135	2	2
136	1	1
137	20	20
138	19	19
139	18	18
140	17	17
141	16	16
142	15	15
143	14	14
144	13	13
145	12	12
146	11	11
147	10	10
148	9	9
149	8	8
150	7	7
151	6	6
152	5	5
153	4	4
154	3	3
155	2	2
156	1	1
157	20	20
158	19	19
159	18	18
160	17	17
161	16	16
162	15	15
163	14	14
164	13	13
165	12	12
166	11	11
167	10	10
168	9	9
169	8	8
170	7	7
171	6	6
172	5	5
173	4	4
174	3	3
175	2	2
176	1	1
177	20	20
178	19	19
179	18	18
180	17	17
181	16	16
182	15	15
183	14	14
184	13	13
185	12	12
186	11	11
187	10	10
188	9	9
189	8	8
190	7	7
191	6	6
192	5	5
193	4	4
194	3	3
195	2	2
196	1	1
197	20	20
198	19	19
199	18	18
200	17	17
201	16	16
202	15	15
203	14	14
204	13	13
205	12	12
206	11	11
207	10	10
208	9	9
209	8	8
210	7	7
211	6	6
212	5	5
213	4	4
214	3	3
215	2	2
216	1	1
217	20	20
218	19	19
219	18	18
220	17	17
221	16	16
222	15	15
223	14	14
224	13	13
225	12	12
226	11	11
227	10	10
228	9	9
229	8	8
230	7	7
231	6	6
232	5	5
233	4	4
234	3	3
235	2	2
236	1	1
237	20	20
238	19	19
239	18	18
240	17	17
241	16	16
242	15	15
243	14	14
244	13	13
245	12	12
246	11	11
247	10	10
248	9	9
249	8	8
250	7	7
251	6	6
252	5	5
253	4	4
254	3	3
255	2	2
256	1	1
257	20	20
258	19	19
259	18	18
260	17	17
261	16	16
262	15	15
263	14	14
264	13	13
265	12	12
266	11	11
267	10	10
268	9	9
269	8	8
270	7	7
271	6	6
272	5	5
273	4	4
274	3	3
275	2	2
276	1	1
277	20	20
278	19	19
279	18	18
280	17	17
281	16	16
282	15	15
283	14	14
284	13	13
285	12	12
286	11	11
287	10	10
288	9	9
289	8	8
290	7	7
291	6	6
292	5	5
293	4	4
294	3	3
295	2	2
296	1	1
297	20	20
298	19	19
299	18	18
300	17	17
301	16	16
302	15	15
303	14	14
304	13	13
305	12	12
306	11	11
307	10	10
308	9	9
309	8	8
310	7	7
311	6	6
312	5	5
313	4	4
314	3	3
315	2	2
316	1	1
317	20	20
318	19	19
319	18	18
320	17	17
321	16	16
322	15	15
323	14	14
324	13	13
325	12	12
326	11	11
327	10	10
328	9	9
329	8	8
330	7	7
331	6	6
332	5	5
333	4	4
334	3	3
335	2	2
336	1	1
337	20	20
338	19	19
339	18	18
340	17	17
341	16	16
342	15	15
343	14	14
344	13	13
345	12	12
346	11	11
347	10	10
348	9	9
349	8	8
350	7	7
351	6	6
352	5	5
353	4	4
354	3	3
355	2	2
356	1	1
357	20	20
358	19	19
359	18	18
360	17	17
361	16	16
362	15	15
363	14	14
364	13	13
365	12	12
366	11	11
367	10	10
368	9	9
369	8	8
370	7	7
371	6	6
372	5	5
373	4	4
374	3	3
375	2	2
376	1	1
377	20	20
378	19	19
379	18	18
380	17	17
381	16	16
382	15	15
383	14	14
384	13	13
385	12	12
386	11	11
387	10	10
388	9	9
389	8	8
390	7	7
391	6	6
392	5	5
393	4	4
394	3	3
395	2	2
396	1	1
397	20	20
398	19	19
399	18	18
400	17	17
401	16	16
402	15	15
403	14	14
404	13	13
405	12	12
406	11	11
407	10	10
408	9	9
409	8	8
410	7	7
411		